WING'S

WING'S QUALITY SEEDS

SEED BOOK

GROWERS OF THE

BEST

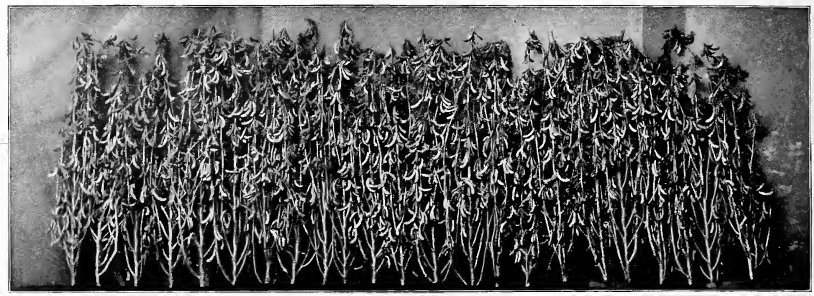
FIELD, GARDEN AND FLOWER SEEDS

THE

WING SEED CO.

MECHANICSBURG, OHIO.

PIONEER ALFALFA GROWERS OF OHIO.



INTRODUCTION

WE went into business feeling that we had a definite line of work to carry out. We had advised farmers to grow Alfalfa, and at first the work laid out for us was simply instructing them how to grow this plant. Each year new tasks have presented themselves. Each year we have found additional plants which seemed worthy of trial. These we have thoroughly tested out ourselves, placed on market and instructed our customers in growing. Now, instead of one plant concerning which we feel the need of advising our customers, there are in the field seeds at least a dozen important ones and in the garden seeds several times that many.

In the field seeds we were the pioneer growers of Alfalfa in the Corn Belt; the first to encourage its growth and to give careful, definite instruction as to how it should be grown. The same might be said of our work with Soy Beans. We discovered Beardless Barley as a nurse crop, and after 15 years it stands without a peer in this work. We believe that we are the only firm in the United States today that is making a systematic effort to build up pure and high-yielding strains of many seeds, including Beardless Barley, the Soy Beans and Winter Vetches. We have felt from the beginning that we desired to cater to the most discriminating trade; that no effort should be spared in our seeds to sell the highest yielding strains, or if necessary to breed these strains up to the highest state of perfection. In this work, owing to the system which we adopted immediately after going into business, we have made, so far as our customers are concerned, practically no mistakes. When any new seed has gone through two or three years in our trial grounds, has then been taken into large acreage on our farms, several methods of cultivation, etc., having been experimented with in the meantime, and after all these tests offered to our customers, there is practically no chance of their making any mistake in following our recommendations. We have been pioneers in recommending first Alfalfa, later Beardless Barley, Soy Beans, Melilotus Alba, the Vetches and Bromus Inermis. Not one of these has failed to make good, and each one is taking a prominent place in permanent agriculture.

Our trial ground work this year was expensive and disappointing, owing to extreme drouth, the worst on record here, but we demonstrated a few things and have somewhat increased our stocks of our new Pedigreed Beardless Barley and a few other seeds. In 1916 we will be able to put 99% pure, high-bred Beardless Barley on market. Tests of the Soy Beans comparing our own with every other promising sort obtainable again shows nothing superior in our trial grounds to the varieties that we are selling.

In our garden and flower seeds we are using the same pains taking care. We had this season nearly 1,000 tests in these seeds. Different strains are carefully compared; different varieties are placed side by side and exhaustive comparative tests made, the results of which are all given without charge to our customers. We want simply the best of everything for them; this is what we have been giving them, and each year we expect our entire list to be better than it was the previous year.

GUARANTEE

While our seeds are selected with the greatest care we do not guarantee them except where it is definitely stated. However, we are perfectly willing that our customers should send our samples for analysis either to the Department of Agriculture at Washington or to your state experiment station, and we will also be glad to have them tested for germination.

PRICES

Prices of many of the grass seeds fluctuate so much in market that we have decided, instead of putting our prices in the catalogue at a high enough level so that we could be sure to maintain it throughout the season, to use the Price List, which is independent of the catalogue, and this will be found enclosed. We will change our prices as market conditions compel us to, thereby giving our customers the benefit of any fall in prices, instead of beginning the season on a high level and maintaining it throughout as some other seedsmen do.

In order to take advantage of our Price Lists, orders should be sent us immediately upon receipt of them. It is probable that many of the grass seeds will fluctuate enough this year so that we will have to change our prices about once a week. We usually change on Saturday.

Some of our competitors guarantee prices for an entire month and issue only one Price List for each month. This would be much easier for us than the way we are now doing, because we could estimate quite closely the amount of seed required for a given month, purchase it in advance at a fair margin, and maintain our prices regardless of market conditions. As a matter of fact, though, we believe our present method is cheaper for our customers than a monthly Price List would be. For instance: in March, 1913, the clover seed market continually declined. We followed the market every day, even when our own Price List quoted higher, and if we issued a monthly Price List we would not follow the market down as we are doing at present. However, in order to positively determine what our customers wanted, we asked several hundred of them for their opinion. About seven-eighths of them requested us to continue as we had been doing.

Another point. On most of our seeds, as you will notice by the Price List, we charge extra for bags and ship net weights. New seamless bags cost us about 23½ cents each, and we charge 25 cents. Used seamless bags cost us 19½ to 22 cents, and we usually charge 20 cents, shipping grain in these. Jute sacks are costing us 11 to 12 cents, and we usually charge 10 or 11 cents. Some of our competitors talk about "free sacks weighed in gross for net." If you buy Alfalfa or Clover, for instance, at 20 to 25 cents per pound, and your sack is weighed in gross for net, you are paying 20 to 25 cents for that sack. Seven-eights of the people to whom we wrote asked us to continue shipping net weights and charging for the sacks as we had been doing.

SHIPMENTS

Unless otherwise requested, we make all shipments the day following receipt of order. When requested, we will hold shipments a reasonable time, until customers are ready to have us make shipment.

IMPORTANT SUGGESTIONS

When ordering seeds of us be sure to specify whether you wish shipment made by freight or express. We have the Big Four Railroad and the American Express only.

Be sure to state your county and railroad, as this facilitates your shipment.

We sell absolutely for cash. We accept checks at their face value, drafts or money orders, but if cash in some form does not accompany your order it is our invariable rule to send C. O. D., or if by freight to attach sight draft to the bill of lading, payable upon arrival of the seed and after your inspection. Go to the bank, pay the draft and get the bill of lading, give it to the freight agent, and he will deliver the seed to you. This method of shipping whereby we attach sight draft to the bill of lading is very safe for our customers themselves, as they do not have to pay the draft until the goods arrive, nor do they have to pay at all unless the goods are satisfactory.

If your seed arrives short weight or damaged, have your agents mark condition and shortage on your expense bill, and send to us immediately. We will either assist you to file claim or do so ourselves, but we cannot do it without this expense bill so marked.

We are glad to answer questions and to help our customers with their farm problems. For years we have been known as legume and soil experts. We can assist you by advising the proper rotation, the best leguminous crops, and the best fertilizers to use, not only for maintaining your soil fertility, but for increasing it. We can also assist you by specifying mixtures of grasses for any part of the country or any soil. We ask our customers to help us by writing their questions on a separate sheet, when ordering seed and asking advice at the same time. This will save us much time, which in our busy season we will greatly appreciate, and will expedite the answering of your questions.

ALFALFA OR LUCERNE

Legumes are the only plants which actually add plant food to the soil; they thus rank of the greatest importance, and permanent agriculture depends vitally upon their use. Some, as mammoth or medium clover, are extremely useful, but only moderately profitable to grow when considered from a monetary standpoint. Alfalfa probably outdistances them all, being a legume which through its great roots brings up soil fertility from great depths in the subsoil, secures moisture for itself from the moist subsoil in time of drought, thus making it the most useful legume that we grow, and in addition it is so valuable either to feed or to sell, that no other crop grown in the Corn Belt excels it as a "money crop."

Finally, Alfalfa is the only crop we know of which will yield you a constant income in the shape of bountiful forage, and which will add to your soil fertility at the same time, this being a remarkable case of "having your cake and eating it." Please see Table 1, Page 26, which demonstrates this fact.

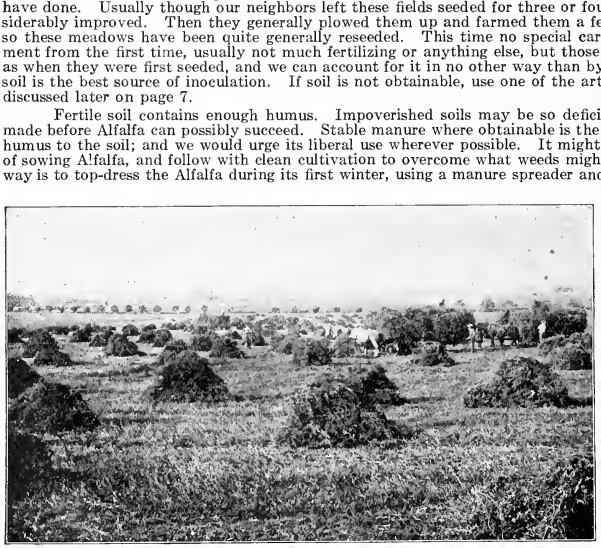
ALFALFA SEEDING—Much needless mystery has been made of the Alfalfa seeding question. So much mystery, in fact, that many farmers are afraid to try it at all. Jones recommends one method and Smith another, and how is the farmer to tell which is right? We began the study of the Alfalfa question twenty-five years ago, and since that time we have carefully watched fields of it in almost every state in the Union. We have corresponded with thousands of successful growers, and with thousands of other growers who were having troubles, and we really believe now that we are able to furnish reliable data as to just what is necessary to do in order to succeed with this plant.

We could almost sum the matter up in four words: Lime, drainage, inoculation and humus. Perhaps we have given these in order of their relative importance. Lime is necessary on soils not naturally of limestone formation or filled with limestone pebbles. The importance of this is impressed upon us more and more each year; in fact, we believe today, that there have been more failures throughout the United States on account of insufficient lime in the soil than from any other cause. In order to make it easier for our customers, so easy that they cannot help succeeding, we give later on full instructions for the use of lime and a list of firms from whom the lime may be purchased.

Then as to drainage; there is no use in planting Alfalfa on any soil where water may ordinarily be found at a depth of less than three feet. The Alfalfa may grow all right until its roots strike this water, but then it will probably die.

Inoculation is not always necessary. That is, plants sometimes succeed well without it. Many times they succeed indifferently well, and gradually get their own inoculation. In many cases they fail entirely without it. We are impressed with the great importance of inoculation. Our own neighbors have seldom used it. Ten or twelve years ago they got the fever, and most farmers planted small fields. Generally these fields did just moderately well. As a rule there were yellow spots, and also as a rule the alfalfa plants grew smaller and more delicate than they should have done. Usually though our neighbors left these fields seeded for three or four years, during which time they considerably improved. Then they generally plowed them up and farmed them a few years, and within the past year or so these meadows have been quite generally reseeded. This time no special care was given, nor any different treatment from the first time, usually not much fertilizing or anything else, but those same fields today look twice as good as when they were first seeded, and we can account for it in no other way than by inoculation. We still maintain that soil is the best source of inoculation. If soil is not obtainable, use one of the artificial cultures. This subject is fully discussed later on page 7.

Fertile soil contains enough humus. Impoverished soils may be so deficient that special preparation must be made before Alfalfa can possibly succeed. Stable manure where obtainable is the very best thing for adding the proper humus to the soil; and we would urge its liberal use wherever possible. It might be best to use this a year in advance of sowing Alfalfa, and follow with clean cultivation to overcome what weeds might be sown with the manure, or a good way is to top-dress the Alfalfa during its first winter, using a manure spreader and applying the manure evenly without large chunks that might smother the young plants. On impoverished soils, we would recommend preparation for Alfalfa one or two years in advance, growing such crops as Crimson Clover, Mammoth Clover, Melilotus, Cow Peas, Canada Field Peas, Soja Beans, or Winter Vetch, and preferably turning them under or else pasturing them off, so as to give the soil the greatest benefit possible from them.



ALFALFA ON ONE OF OUR FARMS. TWELVE ACRES OF FIRST CUTTING IN THIS FIELD MADE 36 LOADS.

Having determined that our soil is sweet, well drained, and sufficiently supplied with humus, the only questions that remain are: the preparation of a good seed bed, sowing at the proper time of year, and the use of good seed. For the seed bed, it is essential that the ground be thoroughly fitted. It must be plowed, unless it is old ground and mellow, such as corn stubble or black ground, which may be thoroughly disced instead of plowing. It is better to firm the subsoil a little, so that

only the surface is really loose. This, because if the entire soil is very loose, the seed may be planted too deep, and also because the Alfalfa seems to prefer the surface being a trifle firmed.

A tool which we find leaves the ground in excellent condition for seeding to Alfalfa is the Clod Pulverizer, manufactured by the A. A. Dunham Company, Berea, Ohio. Get their double Pulverizer, not the single one. Ask them for their free booklet on soil treatment and tell them you want the same machine that we are using. This machine, by the way, is also very useful in fitting ground for other crops.

Ordinarily it is not wise to plow up blue grass pasture or timothy meadows and sow immediately to Alfalfa. It is better to grow another crop one year in order to kill out the timothy and blue grass. Both these grasses will crowd the Alfalfa, and simply turning them over does not usually kill all of them unless the ground is farmed one year.

TIME OF SEEDING—On Woodland Farm, for many years, it has been our custom to sow Alfalfa at oat-seeding time, about the first week in April, using Beardless Spring Barley as a nurse crop. The Barley is usually cut for hay the last of June, and after this we sometimes secure a good cutting of Alfalfa hay the first season, although we do not count upon this, and are not disappointed if we do not obtain it. We sow about three to five pecks barley to the acre, on very rich ground not more than one bushel, and eighteen to twenty pounds of Alfalfa seed at the same time, usually using a disc drill, throwing the Alfalfa seed in front of the drill, unless the ground is very loose, in which case we throw the seed farther back to prevent its being covered too deeply, and usually drag with a light drag. The Alfalfa seed should be covered half an inch to an inch. Where you have fertile soil, rich in lime, with plenty of phosphorus and humus, and where it has grown either Alfalfa or Melilotus once before, and with a good seed bed, fifteen pounds is ample; if you have not these conditions, twenty pounds is none too much.

Seeding with a grain drill is the least expensive method. We believe a better one is to sow the barley with a grain drill, using a good broadcast seeder for the Alfalfa (probably the Wheelbarrow Seeder is as good as any) covering with a good weeder or light drag, and if on very light ground following with a light roller. We believe this will insure very even distribution of seed, and on properly fitted ground, a very uniform covering for the seed.

The very best way to sow Alfalfa is with the new Alfalfa drills such as are being sold by The American Seeding Machine Company, Springfield, Ohio. These drills do very nice work indeed. They reduce the amount of seed required by at least 25 per cent. They are extremely useful also for sowing grass seed on Wheat in the Spring where they make the probability of success fully three times as great as it is where the seed is simply broadcasted on top the ground.

The advantages of early spring seeding are that the rains usually come about the right time for the young Alfalfa, which makes a strong growth throughout the entire season, giving us with the barley enough hay and grain the first year to pay the expenses of planting, and going into winter in the most vigorous shape possible with about ten inches or a foot of stalk standing, enough to hold the snow throughout the winter and induce a fine vigorous growth in the spring. We find beardless barley to be the best nurse crop obtainable. It takes the place of the weeds that would otherwise come, gives us some very excellent feed, and with us does the Alfalfa good and no injury. Oats are not so good, because they shade the ground more, and are more inclined to lodge. We find that the barley hay with the small amount of Alfalfa we obtain with it makes a forage second only to the pure Alfalfa itself.

We cut the barley either for hay when it is in the milk or dough stage, or for grain when fully matured. It is generally a little better for the Alfalfa if cut for hay, but the grain ripens about July 12th, and it is rare that the Alfalfa is particularly suffering for cutting by that time.

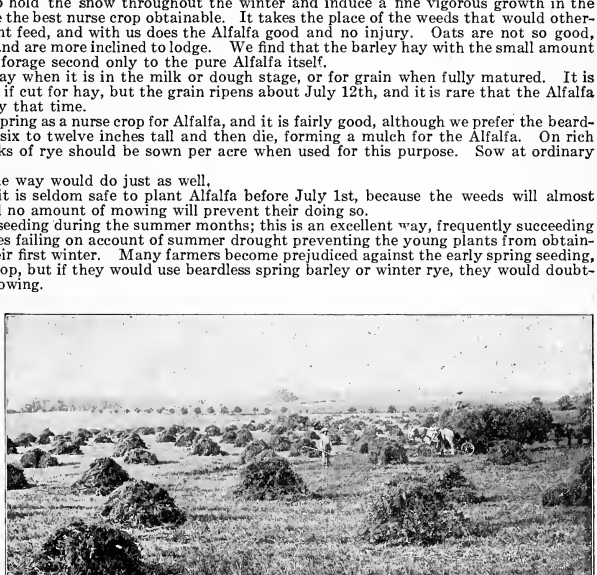
We tested winter rye sown in spring as a nurse crop for Alfalfa, and it is fairly good, although we prefer the beardless barley. The rye will grow from six to twelve inches tall and then die, forming a mulch for the Alfalfa. On rich soils not more than two or three pecks of rye should be sown per acre when used for this purpose. Sow at ordinary oat seeding time, or later if desired.

Winter wheat sown in the same way would do just as well.

Where no nurse crop is used, it is seldom safe to plant Alfalfa before July 1st, because the weeds will almost certainly choke the young plants, and no amount of mowing will prevent their doing so.

Many of our customers prefer seeding during the summer months; this is an excellent way, frequently succeeding as well as our own, although sometimes failing on account of summer drought preventing the young plants from obtaining sufficient growth to go through their first winter. Many farmers become prejudiced against the early spring seeding, owing to their using oats as a nurse crop, but if they would use beardless spring barley or winter rye, they would doubtless be well pleased with the earlier sowing.

For summer seeding we recommend as a good method having the Alfalfa follow a crop of early potatoes, or it may be possible to plow wheat stubble early enough to secure a stand before winter. An excellent way is to plow the ground early in the spring, harrow it frequently as the weeds appear, and sow the Alfalfa during July. If the rains come right, such Alfalfa should make excellent growth before winter and be certain to succeed. We really believe that where Beardless Spring Barley may be used as a nurse crop, the early spring seeding is advisable in the states of Ohio, Indiana, Illinois, Michigan, New York, and much of Pennsylvania. The late seeding is certainly preferable in some of the New England States, in Virginia, and the States south of the Ohio River. The reason for the late seeding in these states is that their climate seems to be such that the Alfalfa thrives better when sown later than when sown early, and



FIRST CROP ALFALFA ON ONE OF OUR FARMS. THOSE WHO ATTENDED THE ALFALFA PICNIC WILL REMEMBER THIS AS THE FIELD BELOW THE FARM ROAD.

also in part of these places quack or crab grass and other weeds will give so much trouble that the early seeding is almost sure to fail on account of them. The farther south one goes, the later is it safe to seed Alfalfa. We have many customers in Georgia, Alabama, Mississippi, Louisiana and Texas, who seed as late as November 1st, but their winters are so mild that the Alfalfa never winter-kills, and it comes on the next spring in just as good shape as if it had been sown earlier in the season.

Many of our customers desire to sow Alfalfa in Corn at the last cultivation. We consider the chance for success by this method to be not more than equal to the chance for failure. The Corn shades the young plants entirely too much, withdraws too much moisture, does not come off the ground early enough in the Fall, and the young Alfalfa plants are very likely to winter-kill during the first winter when sown by this method.

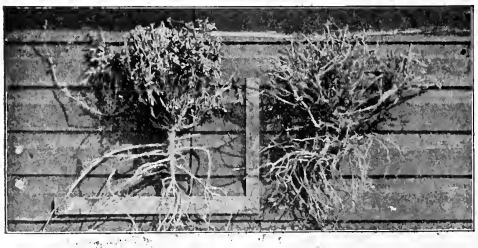
ALFALFA SEED

We have made a careful study of the question of seed, and we consider this point of great importance. Space will hardly permit us to give all of the data which we have collected on this subject, but after having corresponded with a great many men and having tested out different lots of Alfalfa on our own farms, we conclude that irrigated seed is not as good for the great non-irrigated states as seed that was grown on dry land. We have definite tests showing that American seed is nearly always better than any imported seed. We have rather positive evidence that it is unwise to bring Alfalfa seed from the South north, but that, as a rule, it is a good deal better to reverse this condition and bring Northern seed south. Most of our customers in the Corn Belt, or anywhere north of the Ohio River, agree with us that seed grown as far north as Nebraska gives them better results than seed from south of this point, and in consequence we are now buying no seed south of the Nebraska line. In the New England States, and in fact north of latitude 41 or 42 degrees, still hardier Alfalfa seed is giving better satisfaction. After careful investigation we have found that South Dakota has an extremely rigorous climate, subject to great extremes of heat and cold, Chinook winds, the ground freezing over 6 feet deep, meadows subjected to extreme cold when there is no snow protection; further, that ordinary Alfalfa winter-kills badly in this state; that its growers here, from necessity, have used only the hardiest seed. Many of their meadows trace back clearly to seed which has been growing in Dakota for thirty years, and we believe that seed from this state will endure as much hardship, especially of severe cold, as any seed in the world, with the exception of the Grimm and Siberian Alfalfas only. We are using some of this Dakota seed on our own farms. We do not really know where the line is at which our customers should abandon Nebraska seed and use the Dakota. For a few years they must use their own judgment on this point.

VARIETIES OF ALFALFA

Ninety-nine hundredths or over of American growers of today are probably growing the common Alfalfa, such as we have already discussed. In buying the common Alfalfa the only things to pay much attention to are securing seed from the proper latitude and securing seed that is pure and viable, as already discussed. Until the past year or so there has been practically no other Alfalfa seed available, but now there are a number of new varieties coming on to the market, some of which are, in our opinion, of such importance that our customers should know of them, and at least one of them the Grimm, has already proven to be so important that we think a great many of our customers will do well to begin using from it.

GRIMM ALFALFA—This great variety was introduced into the United States a good many years ago, being brought into Minnesota, where Alfalfa growers were having considerable trouble to prevent winter-killing. It throve immediately, and we believe there is practically no record of any large percentage of Grimm Alfalfa having winter-killed in the United States, unless exposed to an ice sheet. It produces just about the same as common Alfalfa, looks just about like it, and aside from its resistance to winter-killing it has a similar value to the common. However, another point decidedly in its favor is the fact that it has a branching root instead of a single tap root, like ordinary Alfalfa. This branching root enables it to live above hard-pan or in poorly-drained soil where the ordinary Alfalfa would perish. Its crown is four inches underground. This helps to prevent it from winter-killing, from heaving in the Spring, and possibly, in other ways also. From this crown it sends up an extremely large number of stalks. Our illustration will give some idea on this point.



GRIMM ALFALFA PLANTS

For several years this variety sold at decidedly high prices. It is now much more moderate moderate priced, and we believe a great many of our customers would do well to use at least part of their seed from this variety. It is not necessary to sow it quite as thick as common Alfalfa, and a meadow of it ought to endure much longer than common Alfalfa. For several years it has been difficult to obtain seed that was known to be pure, but we have made arrangements with one of the largest growers of this variety in the United States to supply us with a moderate quantity of seed, with his affidavit as to genuineness. We do not think our customers need to buy Grimm Alfalfa unless they are having trouble with winter-killing or with hard-pan, or with soil which cannot be drained deeply enough to grow the common. In a few years, however, Grimm Alfalfa seed will probably retail at 25 or 30 cents per pound, and when it reaches this point we believe that most of us had better begin substituting it for common Alfalfa.

SIBERIAN ALFALFA

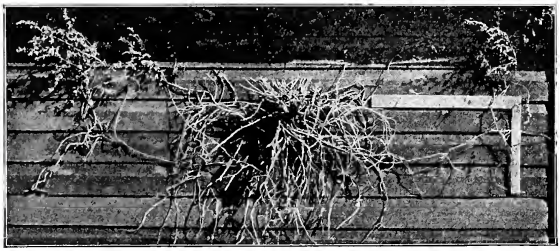
In introducing these varieties the Government spent 10 or 15 thousand dollars for a comparatively few pounds of seed. They went to great pains to secure absolutely the hardiest Alfalfa in the world. Dr. Hansen, the great government plant prospector, secured this seed after great hardship and labor. At present the seed is scarce with each variety, with some varieties extremely so, and the prices are high. These varieties have not been tested much in the Corn Belt as yet, but are growing principally in South Dakota. We secure our supply from the same man who furnishes us the Grimm, and he gives an affidavit as to their genuineness.

COSSACK—This variety is similar in every respect to the Grimm. It has the same underground crown, the branching root, the same hardiness, and it looks much like Grimm. The grower, however, thinks it will outyield Grimm a little in hay. It has a further advantage in that it can be easily distinguished from common Alfalfa by its bloom, which is purple, greenish purple and yellowish purple, to such a marked degree that a patch of its presents a decidedly variegated appearance like a flowerbed of different colors, and no one ever need to be uncertain about having a Siberian Alfalfa when buying this variety. In case it is found to outyield the Grimm, it will, of course, supplant that variety as soon as the seed becomes plentiful enough. Price—packet, 25 cents; oz., 50 cents; lb., $5.00.

CHERNO—This variety is so similar to the Cossack that we were able to see no practical difference between them, and the grower recognizes no difference. Price—packet, 25 cents; oz., 50 cents; lb., $5.00.

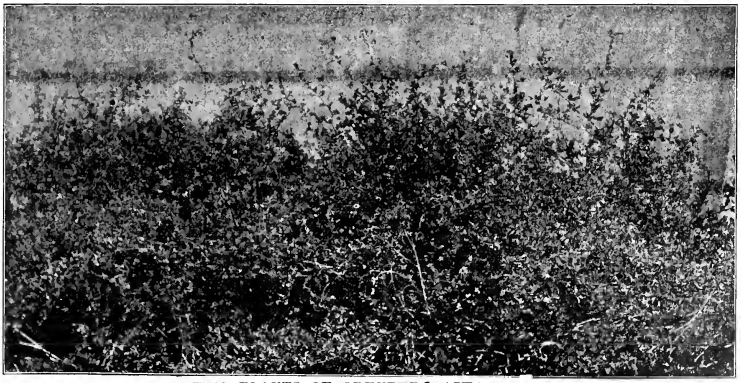
SEMIPALATINSK—This is rather a coarse, large variety, believed by Dr. Hansen to be suitable for pasture in high, rocky fields. It seems rather coarse to us for haymaking, being on somewhat the order of Melilotus Alba, although it does not grow more than about four feet high. It has not been sufficiently tested in the Corn Belt to determine just what its value is in this region. It has the same branching root, underground crown and hardiness of the other Siberian Alfalfas. Price—packet, 25 cents; oz., 50 cents; lb., $5.00.

ORENBERG—We do not know what this variety will do in the Corn Belt, as it has been too rare to be tested there yet, but from appearances we consider this a wonderful variety. It has the same hardiness as the rest of the Siberian Alfalfas. The root is practically all forked, the tap part being not over four inches long, and strong, large roots branching in every direction immediately below the crown. Many of these roots run about eight inches underground, and from time to time send up new plants.



ORENBERG ALFALFA

Our illustration shows one plant which we dug up, the roots of which had pushed out and sent up new plants over a space seven feet in diameter. The plant itself was three years old. The crown from the original plant is enormous. Most crowns that we examined were about 15 inches in diameter at the ground. The true crown itself is about four inches underground, branching in every direction, as will be seen by our illustration. We examined and photographed two plants side by side, each three years old, and each plant having crowns at the surface of the soil over two feet in diameter, and estimated at over 500 stalks for each crown. It would simply be impossible to heave this variety out of the soil or winterkill it. It should stand hard-pan quite close to the surface. The forage produced seemed to be very large in amount, owing to the countless stalks sent up from each crown. In addition, the stalks were fine and much more leafy than any other variety that we have ever seen. The grower thinks it would only make two cuttings per season, but says he would sooner have one cutting from it than two from common Alfalfa, owing both to the quality and the quantity produced at a cutting. This variety is really too rare to quote, but in a few years its seed will be as plentiful as Grimm is today. We will sell a very small amount this year at about one cent per seed. We will also sell a few plants at 25 cents each. Each succeeding year the price will probably be lower. We have only two ways that we will offer this seed, in packets, containing about 25 seeds, at 25 cents each, and in educational packets as described on the next page.



TWO PLANTS OF ORENBERG ALFALFA

EDUCATIONAL PACKETS

Feeling that the price of these new and rare Alfalfas was at present rather high for our customers to buy in quantity, we have prepared a collection containing about 10 of the new rare sorts, put up in small packets. This collection includes among others the Grimm, Cossack, Cherno and Orenberg, with hardy Dakota Alfalfa, Turkestan, hardy Melilotus Alba, and several other Siberian Alfalfas which we have not described. These packets contain from 25 seeds to a teaspoonful each. We believe it will pay a great many of our customers to purchase a set of these educational packets, sowing the seed in the garden and watching it for say three years. By that time you will know whether you want any of these new varieties or not, and also the seed by that time will probably be much lower-priced.

TURKESTAN—This variety is becoming known quite accurately as Dwarf Alfalfa. The Tennessee Experiment Station says its sale in the United States should be prohibited. During the past year or so many people wrote in to us describing what they called "the common or tall growing Alfalfa" and "Dwarf Alfalfa." We finally discovered without a shadow of a doubt that their Dwarf Alfalfa in most cases was simply Turkestan. We would not sow the stuff on our own farms it the seed were given to us. We never have sold any of the seed, and certainly we do not intend to. We carefully tested this variety out on our own farms and were thoroughly disgusted with it. It made a yield about half as good as the American seed; it was puny, delicate stuff, and we feel that we could not afford to sow it, even if the seed were given to us. Correspondence with most of the Experiment Stations brings out similar experiences with them. The Kansas Experiment Station probably tested it more carefully than any other. Their report on a four-year test gave an average of one thousand pounds per acre less forage from Turkestan seed than from the American seed. The table below shows the way this would figure out in results for four years.

TABLE 4.

Why We Do Not Recommend Turkestan Alfalfa.

The United States Government finally admits that Turkestan Alfalfa is not much good, especially for territory east of the Missouri River. It says that it does not stand humidity well, that the yield is less than that of good American Alfalfa, and that there is no good reason why farmers in this territory should sow it.

Experiment Stations say that it yields less than the good American seed.

Kansas Station found the difference to be 1,000 pounds per acre in favor of American seed. Our own tests showed not over half the yield of Turkestan that we received from American seed. Using Kansas figures gives the following results:

Credit American Seed.		Dr. Amer. Seed.		Credit Turkestan Seed.		Dr. Turkestan Seed.	
		Cost of seed per A., $4.00				Cost of seed per A., $3.33	
1st yr. hay at 3 T. per A	$ 36.00			1st yr. hay at 2½ T. per A.	$ 30.00		
2d yr. hay at 3¾ T. per A.	45.00			2d yr. hay at 3¼ T. per A.	39.00		
3d yr. hay at 3½ T. per A.	42.00			3d yr. hay at 3 T. per A.	36.00		
4th yr. hay at 3 T. per A.	36.00			4th yr. hay at 2½ T. per A.	30.00		
Total	159.00		4.00	Total	135.00		3.33
		Net	$155.00			Net	$131.67
						Bal. fav. Am. Seed	$23.33

ALFALFA PLANTS

West of the Missouri River setting one-year-old Alfalfa plants instead of sowing seeds seem to us to be a very practical thing. Some of the growers are setting them like corn, about three and a half feet each way, and cultivating like corn. East of the Missouri the use of plants, except in a small way, does not seem as practical to us, expecially when setting a field to anything but the new, high-priced varieties. In securing a start of Grimm, or, still better, of Siberian Alfalfas, one year's time is saved by setting plants, and the growers assure us that the results are almost perfect by this method, whereas seeding sometimes fails. We have made arrangements with the same grower who furnishes us Grimm and Siberian Alfalfa seeds to furnish plants also, and we are prepared to supply Grimm in any quantity, Cossack, Cherno and Semipalatinsk in moderate amounts, with a very few Orenberg.

It probably is unnecessary to inoculate when planting roots, and the grower assures us that practically every root lives.

Our prices are prepaid to any point in the United States east of the Rocky Mountains. The plants will not be shipped until planting time. When the plants reach you, open them, moisten slightly, and if not immediately ready to set, heel in in moist soil. Cut back the root to about a five-inch length. Set with the crown two inches underground. Have your soil thoroughly fitted and press the earth firmly around the plant.

PRICES.

Grimm, one year plants	100	$ 1.25
Grimm, one year plants	500	5.50
Grimm, one year plants	1000	10.00
Cossack, Cherno and Semipalatinsk, one year plants	100	2.50
Cossack, Cherno and Semipalatisnk, one year plants	500	11.00
Cossack, Cherno and Semipalatinsk, one year plants	1000	20.00
Orenberg, very limited supply		25c each

ALFALFA FOR THE POULTRYMAN—The poultryman will find great profit from having a run of Alfalfa. This should not be too small a space, but large enough so that the poultry can forage at will without injuring the plants, and so that he may cut the hay regularly and save it for winter feeding. Poultry thrive upon a diet composed chiefly of Alfalfa, with some grain in addition.

ALFALFA FOR THE DAIRYMAN—No other food forms so good a basis for the ration of a dairy cow as Alfalfa, the reason being its extreme richness in protein, its easy digestibility, and the additional reason that the cows love it so, and eat so greedily. Alfalfa-growing countries have a great advantage over other countries in the dairy business, so that it is well for the dairyman, wherever he is situated, to begin to consider how he may make his own soil an Alfalfa-growing soil. It has been found that the cost of milk production can be cut square in two by the use of home-grown Alfalfa. A ton of Alfalfa hay, early cut and nicely cured, is worth as much, pound for pound, as the best wheat bran for food for the dairy cow. Even ordinary Alfalfa hay is worth nearly as much as wheat bran; so that it is clear to the Eastern dairyman, who must pay $25.00 a ton for wheat bran, a field of Alfalfa yielding no more than three or four tons per acre is a veritable gold mine. Governor Hoard has found that with Alfalfa in the dairy ration it is necessary to use only about half the amount of grain that must be fed when other forage is provided. In truth, with Alfalfa hay and corn silage, little or no other food is needed to keep the dairy cow in the most profitable producing condition. We thus emphasize the importance of Alfalfa to the dairyman, because we believe that its use in this great industry will bring about fully as great an increase of profits as will the use of the silo, the pure-bred sire, or the milk sheet and the Babcock test, and may be a little more than the other improvements. There was a time, only a few years ago, when it would have seemed not worth while thus to attempt to raise the hope of the dairyman, for then it had not been demonstrated that Alfalfa could be grown away from the "Alfalfa Belt." But since then we have learned the few and simple requirements of the Alfalfa plant, and now we do not hesitate to affirm that we can grow Alfalfa anywhere, upon any farm in the United States, not at too high an altitude, if the few simply but essential conditions are complied with.

TIME TO CUT ALFALFA—We usually cut it when about one-fifth of the plants begin to show bloom. A somewhat better way of ascertaining the proper time is to watch for the buds at the base of the plants and cut when they appear above the ground. These buds are the beginning of new stalks, and their appearance indicates that the plant is ready to make another crop.

ALFALFA AS A PASTURE CROP—It is especially adapted to being depasturized by horses and hogs, and perhaps the greatest profit comes from such use. The practical difficulty with depasturizing Alfalfa with sheep and cows is that, being a clover, it sometimes causes bloat, similar to clover bloat. The best preventive of bloat is to have the Alfalfa mixed with grasses in the pasture. When this is done the animals eating the two together are very much less apt to bloat. The best grass to mix with Alfalfa for pasture is Brome Grass (Bromus Inermis), or Tall Meadow Oat Grass (Avena Elatior).

In pasturing Alfalfa to get the best results one should not turn on it before the plants have grown nearly to the blossoming stage; furthermore, the pasture should be so large that the animals will not eat it down closely. It should be mown at least twice during the season and made into hay. It will not do, however, to pasture the field with sheep or cattle immediately after it has been mown, this being the surest known method of inviting disaster. After Alfalfa is mown, it is not safe to turn onto it until the plants have reached the woody stage. Thus treated, Alfalfa pastures will last for years, and afford an astonishing amount of nourishment.

All stock should be taken off of Alfalfa pastures by the first of October, or in the Eastern States at the beginning of hard frosts; this, both for the good of the Alfalfa and for the good of the animals themselves. It is dangerous to depasturize frozen Alfalfa, and it is not even wise to cut it for hay. A profitable scheme sometimes practiced is to break an old blue grass pasture, plow it rather deep, fertilize it well, and seed it down to Alfalfa. A good stand of Alfalfa is almost assured by this method, and, while the blue grass comes up immediately and fills in between the Alfalfa plants, within a few years the amount of combined herbage yielded by this practice is almost incredibly great, the grass itself yielding more than it did before the Alfalfa was sown upon it. Alfalfa thus sown will not last as long as when the grass is absent, but while it is there it is extremely profitable

In any of the states east of the Missouri we think that farmers who pasture Alfalfa with cattle and sheep may be reasonably sure to have some losses, no matter how careful they are.

ALFALFA TURNING YELLOW—This may be caused either by a leaf spot or rust, or it may indicate that conditions are not right with the plant, that it needs lime, drainage or inoculation. Mowing will usually check the rust; the other troubles are fully discussed later on pages 0, 0 and 00.

INOCULATION—All legumes have tiny bacteria that work on their roots, forming "Nodules." These bacteria draw nitrogen from the air, and supply the plants with it, and also add it directly to the soil. Without these bacteria the legumes will soon perish, although most of them seem to find their proper bacteria in almost any soil. Alfalfa is an exception, and it nearly always pays to supply its bacteria artificially. This may be done very inexpensively. Obtain soil from some nearby Alfalfa field, and apply it at the rate of one hundred pounds per acre, sowing it late in the afternoon and harrowing it in immediately before allowing the sun to strike it. This is the best way to inoculate. Soil from around the Sweet Clover or Melilotus roots answers equally well. Another excellent way is to sow a few pounds of Alfalfa with your red clover. After the clover is plowed up, sow to Alfalfa, and you will probably have the field inoculated.

Some of our customers find it impossible or impractical to use soil for inoculation, and these we can supply with Nitragin, an artificial inoculation which we have investigated, have used ourselves to a limited extent, and which we believe to be the most reliable of any on the market. We can furnish this for any legume; prices, garden size, $1.00; one-acre size, $2.00; five-acre size, $9.00.

We always refuse to sell soil from our fields; but this year we have secured from a neighbor a few tons of thoroughly inoculated soil, and while it lasts we will furnish this to our customers at the following prices: 100 lbs., $1.00; 500 to 1,000 lbs., 80c per cwt; shipped in jute bags without extra charge for containers.

Dr. H. Somerville, Chest Springs, Pa., whose advertisement appears on page 12 of this catalogue, is prepared to furnish inoculated soil, and we advise our customers who want inoculation to write to him.

LIME IN THE SOIL—Lime is one of the master keys to permanent agriculture. We must have nitrogen or else all the plants perish. The only way that we can afford to secure nitrogen is by drawing it from the air through the bacteria on the roots of leguminous plants, and these bacteria simply cannot live in soil that is deficient in lime; hence the absolute necessity of being sure that we have enough lime in all farming soils.

Alfalfa thrives best in soils that are abundantly supplied with lime. It absolutely fails where lime is deficient. Nothing will take the place of lime, and we believe that there have been more failures throughout the Eastern States owing to this deficiency than from any other cause.

KINDS OF LIME—Ground limestone is now manufactured in many places in the United States and sold usually, where made, for about $1.25 per ton. The finer it is ground, the more quickly it is available. It should be applied at the rate of two to four tons per acre; although where it is inaccessible, and therefore costly, much lighter applications are used with good results, although not so lasting. Sometimes one may get crushed limestone screenings, much of it as fine sand. This stuff is used for concrete work, walks and ballast, and often may be bought as low as 50 cents per ton or less. When the ground limestone is not available, and this coarser material is, we advise its use. Put on more of it, and eventually every bit of it will become available. It will last for many years in the soil, giving out its beneficial influence constantly. Many farmers having ledges of limestone upon their land can well afford to grind their own limestone at home; a machine capable of grinding a little more than a ton an hour and taking in stones 11x13 inches in size costs about $600.00. These machines are very durable and the expense of operating them is quite light. Various firms manufacture this machinery. We think our customers will find the machine made by The Jeffrey Manufacturing Company, 980 First Ave., Columbus, Ohio, to be useful and satisfactory for grinding limestone. We have carefully examined this machine and watched its work and we believe it to be all right. We think the cost of grinding with this machine would be around 50 cents per ton.

OTHER FORMS OF LIME—Very long continued experiments, expecially in Pennsylvania, show that caustic lime attacks the humus of the soil, and that at every Experiment Station where used, ground limestone rock or ground oyster shells applied at the rate of about two tons per acre every two or three years have given decidedly better results. The caustic lime at the Pennsylvania Experiment Station ate up $7.00 worth of humus annually when used in just sufficient amounts to correct the acidity. We think that caustic lime should not be applied to any soil.

Agricultural lime, or hydrated lime, is simply caustic lime that has been ground and has had water added. When it can be obtained at a reasonable price it is probably safer to use than caustic lime.

AIR-SLAKED LIME—Thoroughly air-slaked lime is really the same thing as ground limestone, and there are places where caustic lime may be obtained cheaply but where freight makes ground limestone prohibitive. These places should use air-slaked lime, but from six months' to a year's time should be given this lime for thoroughly slaking. It should be used at the rate of two tons per acre every two or three years. It is unwise to sow lime and acid phosphate at the same time, as the lime would neutralize the phosphate; this would not apply to untreated phosphate rock or to basic slag.

LIME NOT EVERYWHERE NEEDED—Because of the widespread interest in Alfalfa and lime, we get letters asking about the application of lime from regions where we cannot think lime is needed. Hardly anywhere is it needed in the arid region, in the Dakotas, in Nebraska, perhaps nowhere in alkaline soils; probably not in any place where limestone gravel is mixed through the soil by the glaciers, would additional lime be especially needed. When it is somewhat difficult to get stands of red clover; when "sorrel" comes in the land, and crab grass crowds out the Alfalfa; when the Alfalfa plants have a sickly yellow appearance instead of a dark vigorous green; then one may safely assume that lime is needed; and in the humid regions of the East, wherever Kentucky blue grass and white clover is not the natural carpet of the soil. Alfalfa growers should take heed of the need of more carbonate of lime before sowing their seed.

ALFALFA AND TILE UNDER-DRAINS—The question is often asked: "Will Alfalfa stop tile under-drains?" On Woodland Farm, with probably eighteen miles of tile under-drains, only a few hundred yards have given trouble from being stopped with Alfalfa roots. These places where trouble has occurred are where running water flows through the tile continuously from perennial springs. In no instance has the Alfalfa given trouble to ordinary farm drains where the tiles become dry in summer.

A THIN STAND OF ALFALFA—It rarely pays to thicken Alfalfa. The seed will usually come up all right, but it will mostly perish throughout the first season. Discing will make the Alfalfa stool out more and thereby help the stand, but we no longer recommend this on account of there being some danger of fungous diseases attacking the mutilated crown. Melilotus Alba may be sown in a thin stand, and will yield about one cutting, when it will probably die. Alsike or Medium Clover will sometimes catch in a thin stand, but this is only moderately certain. The very best thing to do usually is to plow the thin stand up and reseed it. If plowed early in the spring and plowed deeply, it will not kill nearly all of the old plants, and if immediately reseeded the second time good results are almost certain.

WEEDS IN ALFALFA—Good soils are frequently stored with weed seeds; yet a thorough cultivation of the ground the year preceding the sowing of Alfalfa will accomplish much. Ordinary weed seeds are pretty well destroyed by the mower running over the ground two or three times the first season. Canada thistles are said to be eradicated by the growing of Alfalfa, and many other serious pests, including Convolulus Arvensis, variously styled Bindweed, Wild Morning Glory or Wild Pea Vine.

In some of the far Southern States an enemy constantly to be fought is the Johnson Grass. In some of these States Alfalfa seed is produced and is very likely to be mixed with this pest.

We guarantee our seed absolutely free from this Johnson Grass, and growers in any country who are troubled with it may with perfect confidence purchase our seed.

Kentucky blue grass and other grasses frequently creep into Alfalfa and crowd it. If left alone they will eventually choke out the Alfalfa. We believe the best thing to prevent this is a spring-tooth harrow with the teeth sharpened into diamond-shaped points not more than one inch wide. Use this harrow immediately after

any cutting. It will remove Kentucky blue grass, foxtail, and many weeds, and its continued use will probably keep meadows almost entirely free from weeds, while it will injure hardly any Alfalfa plants. The diamond-shaped points will prevent any undue ridging of the loose earth thrown up. This harrow may be obtained from the Bucher & Gibbs Plow Co., of Canton, Ohio.

There are weeds, however, that will get the better of Alfalfa, and that right speedily. One of the worst is dodder. Not many farmers know dodder when they see it. It is a parasitic vine, having an almost leafless yellow stem as large as a small twine string, which runs through the Alfalfa, twining around the stems, sending little rootlets in to suck the juice of the plant. Dodder begins its life from a seed dropped to the earth when the Alfalfa is sown; but, after having had a brief experience with its root in the soil, it leaves the earth and roots only in the growing Alfalfa, which it binds together in a death grip, making a dense tangle of yellow vines and slowly dying Alfalfa plants.

Farmers cannot afford to treat dodder as they would any other weed. It is so deadly that it must be stamped out immediately or it will become a very serious pest, and the methods used to exterminate other weeds will not answer for this one. If there are only occasional small patches to be found, mow the Alfalfa in these patches before the dodder begins to bloom; then, in a few days, scatter straw over the infested areas and burn it. This may kill the Alfalfa plants, but it will probably kill the dodder also. If your field is badly infested, there is nothing to do but plow it up and plant it to corn or some cultivated crop for one or two years.

Dodder infests clover just as frequently as it does Alfalfa, and it is just as dangerous in the clover as it is in the Alfalfa. Farmers should take great pains to prevent this pest from becoming established in their land and should send samples of their seed to their Experiment Stations for analysis before seeding.

Our own Alfalfa seed and also our Clover seed are guaranteed free from this pest. If your Experiment Station finds any dodder in our seed we will gladly take back the seed and return your money.

CLIPPING ALFALFA—Alfalfa sown in April with a nurse crop will need not more than one clipping after the nurse crop is removed. If the summer is cool, and weeds are not threatening too much, it will not need to be clipped at all. Better mow it too little the first year than too much. When you remove the nurse crop, mow it close to the ground, no matter what size the Alfalfa plants are. Then, if you clip the Alfalfa, do so by August 15th. There is not the slightest danger of Alfalfa's smothering itself by making a rank growth late in the summer or fall and going into winter even knee-high without being clipped. If Alfalfa is sown in July or August it should never be clipped the first year.

MAKING ALFALFA HAY—Alfalfa hay must be cured in the same manner as Red Clover, with this difference, that as the leaves of Alfalfa when dry are extremely brittle, care must be taken to prevent their loss. This simply necessitates raking the hay when still quite tough, and it should also be shocked before it is bone dry. Alfalfa hay will cure admirably if raked quite green, shocked immediately, and allowed to stand in the shock for several days. If this method is used there will be very little loss from storms, and the hay will be of the finest possible quality. Hay caps may be used, if desired, with excellent results. When the hay is cured in the shock, open up the shocks to the sun and air for an hour or so before putting the hay into the barn. Alfalfa hay will stand more punishment from storms than any other hay that we know of. It will also keep excellently in the stack, although we think it a more difficult to stack than Timothy hay. It may be put in the stack or mow with a trifle more sap than any other kind of hay.

INOCULATED ALFALFA SOIL.

Especially prepared for inoculating new land for the growing of Alfalfa. 75c per cwt., or $10.00 per ton, f. o. b. cars. Send for free booklet "How to Grow Alfalfa." Dr. H. Somerville, Chest Springs, Cambria County, Pennsylvania.

THE CARE OF ALFALFA MEADOWS.

Many of our customers who have succeeded in getting good stands of Alfalfa do not know what to do with their stand after they get it, and a good many failures, or partial failures, are traceable to this lack of information.

First as to lime. If your soil is acid, and if you applied two tons per acre of ground limestone rock when seeding and secured a good stand, apply two tons more at least every other year. If your soil is neutral and not particularly acid, then two tons of limestone need not be applied oftener than every third or fourth year.

As to the weeds and grass, if you have time it will keep your meadow beautifully clean, free from all weeds and grasses, to run an Alfalfa harrow over it once or twice after the first or second cutting, and to do this each year. We prefer the first cutting for this work. However, do not do this after the new growth obtains a good start, as you are quite likely to check its growth and make the next crop of hay short thereby.

Most important of all, do not neglect to feed your Alfalfa meadows liberally on Phosphorus. Our own system is a six-year rotation, four years in Alfalfa and two years in corn, manure being applied to the second corn crop; then when seeding the Alfalfa we apply phosphorus liberally, and if our estimate shows that the plants have consumed more than was applied when seeding down, we top-dress the meadow, using either bone meal or basic slag for this purpose. A good crop of Alfalfa removes annually about 125 pounds of basic slag per acre. When seeding down we use not less than 300 pounds. Therefore, at the end of two years at least 250 pounds of this would be exhausted, and it will be found to be very profitable to apply again not less than 300 pounds. We really believe a better way would be to apply a four years' supply at once, simply because the interest on the money invested in this fertilizer would amount to less than the extra cost of making a second application. If you are using a 27 per cent bone, 200 pounds of it will go as far as 300 pounds of 17 to 19 per cent basic slag. We find it just as important to feed phosphorus to our Alfalfa meadows as it is to give a diary cow more than a maintenance ration.

We applied alternate strips of no fertilizer and of basic slag after the first cutting to a part of the field which was not doing well. The part receiving slag doubled in yield the strips not receiving it, and one cutting from these strips paid the entire cost of the application of fertilizer. When obtainable we prefer basic slag for top dressing in preference to any other fertilizer, but, as it is made in Germany, it will not be obtainable until the European war is ended, and until then we advise our customers to substitute steamed bone meal.

Many people ask us if they shall top-dress their Alfalfa with manure, and some are afraid to do this on account of weeds. If the Alfalfa harrow is used there need be no fear of the weeds, and this top dressing will be found to be beneficial in all cases if applied with a manure spreader in the winter-time. We have seen injurious results when the manure was applied in the summer.

LIST OF LIME MANUFACTUERS.

*The Interstate Stone Company, Lewisburg, Ohio. Interstate brand, 94-90 per cent. Calcium Carbonate.
*The Security Cement & Lime Co., Baltimore, Washington, Pittsburg; Main Offices, Hagerstown, Maryland.
*The France Co., Ohio Bldg., Toledo, Ohio.
*The Kelley Island Lime & Transport Co., Cleveland, Ohio.
The National Lime & Stone Co., Carey, Ohio; Hydrated and Agricultural Lime.
*Haserot Lime & Phosphate Co., 415 Huron Road, Cleveland, Ohio.
*The White Sulphur Stone Co., Marion Ohio; Works at White Sulphur, Ohio.
*The Charles Warner Co., Philadelphia, New York, Boston; Executive Offices, Wilmington, Del.
*The Fischer Lime & Cement Co., Memphis, Tenn.
*The Ditlinger Lime Co., New Braunfels, Texas; also manufacture Hydrate and Fertilizer Lime.

*Handle Ground Limestone Rock.

CORN

Corn has rightfully taken a place as one of the great American crops, and we are glad to see the great interest that is being taken in its production. The care that is used in its culture, the frequent breeding plots used by farmers them selves, and the careful germination preparatory to planting being done by farmers themselves all over the country—this is as it should be. We believe that our own methods have fully kept pace with the times in everything pertaining to the growing of large crops of corn as well as the production and care of the seed. About fifteen years ago we began using the ear row test plots, at that time doing so for the sole purpose of increasing our own yield and with no thought of selling seed. From that time on we have had our breeding plots each year, beginning with one variety and gradually extending until we have included not only all the varieties that we are selling today, but a number of others. From these ear row test plots our corn has gone through multiplying plots into the fields, and throughout we have worked carefully to secure, first, maximum yield consistent with reasonably early maturity, so that we can count upon the corn's being ripe every year, and, second, a fixed and desirable type. Science has reduced corn breeding to as accurate a thing as we know of, and both the Experiment Stations and breeders among farmers themselves universally recognize iths. When we find in our breeding plots that an individual ear is producing an uuusually high yield, we are just as certain that its offspring will also produce highly as we are that daylight will follow darkness. This has been proven so often that it is hardly necessary to discuss it. Those of you who have been breeding corn for a number of years have doubtless been surprised the first year to find in your breeding plots one ear producing 100 or maybe 125 bushels per acre, and beside it another ear apparently as good when selected producing only 45 bushels. You have doubtless been gratified to find after a number of years' work that the variation in your corn was becoming very much less, that your breeding plots would show perhaps nothing below 85 bushels, and you have known that the reason for this was that you had eliminated the low yielding strains from your corn. On our farms we think we have increased the average yield not less than 20 bushels per acre for breeding alone. Our breeding work has followed closely along the lines of Experiment Station work, and that of the greatest corn breeders in the country. There are two things that we have not permitted in our breeding work: the encouragement of types of corn which were too big and too late for States in the latitude of Ohio, and the placing of symmetry and beauty anywhere nearly on a level with yield per acre. Both in our breeding and selection of stock corn for seed purposes we constantly reject large ears that give indication of being too late for our locality, and in our breeding work we adhere to yield per acre and maturity, irrespective of whether beauty accompanies it or not, and constant experiments of our own as well as the Experiment Stations have fully demonstrated that this is the common-sense way to handle the matter. A few of our customers complain that our corn is not as fancy in appearance as they wish; practically never does a customer write in, however, after having grown a crop of our corn and say that he was disappointed in his yield. Naturally we like a beautiful corn as well as anybody, and naturally enough we pick this whenever it is right in other ways, but we must first have the yield and a sufficiently early maturity before we dare to even consider beauty.

Now, as to our methods of handling seed corn. In the first place, we devote years of time to breeding up a strain or a variety until we get it good enough to offer; then we put it out, either on our own farms or ad-

joining farms in our immediate neighborhood on contract, we furnishing the seed each year and selecting just what we want from the fields. None of our seed is grown more than twenty miles from us; the breeding and selection is all in our own hands. We would grow all of our own seed corn ourselves, but we have not enough land. We select the seed in the fields as early as it is possible to begin husking; it is then hauled immediately to our warehouse, placed in steam-heated rooms and dried. Corn that is dry enough so that we know it will cure out is placed in open, airy crates, and so arranged that the ears touch each other very little. Corn that is not quite so dry is hung on patent wire hangers; either method gives excellent results when a reasonable amount of judgment is used. As soon as it is dry enough it is carefully inspected again by experts, the butts and tips are shelled off and sold to the elevators along with the irregular shaped grains that are taken off by the grader. About five-sixths of our customers want their corn nubbed and tipped, shelled and graded, and about that proportion of our corn is shelled up ready to go out when the busy season comes on. We usually get this work done before our actual rush comes, because after that time we cannot stop to work much in the corn.

Last year (and this in addition to our regular breeding work) we had out a large variety plot, growing each variety that we handle as well as several others, side by side. Last year we secured much valuable data in this way, part of which is given in the following pages. This year the most severe drought on record here nearly ruined our work in the corn variety plot, only three or four varieties doing well enough to warrant our taking notes on them.

ENSILAGE CORN—Many customers ask for our opinion on ensilage corn, and we are glad to give it. We make considerable ensilage every year, have tested many different ways, and have finally decided very definitely what we like, which is, in brief, the use of a medium-sized variety, one that ordinarily has medium-sized fodder and that will mature sound corn in not less than one hundred and twenty days. We plant this corn at ordinary corn-planting time, sowing very thickly, using twenty pounds of seed per acre. This year we used 115-Day Yellow fo this purpose. This variety is naturally quite leafy, the fodder is not unduly large, and in every way it fills our idea as a good ensilage corn. We are thoroughly pleased with the result. Planting as thick as we did, most of the stalks did not get much larger than a man's thumb, and the plant looked like a mass of leaves. We think such corn would have from one-fourth to one-third greater feeding value than corn planted the ordinary way, and nearly double as much as the big Southern stuff which is sometimes used for silage.

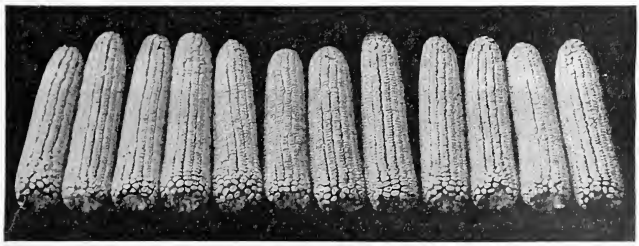
Our favorite varieties for this purpose would be 115-Day Yellow, 110-Day Yellow, Reid's Yellow Dent and Funk's Yellow Dent for central localities, 120-Day Yellow or Clarage for Northern localities, Whitecap being probably all right for latitude a little south of here or for this latitude.

WING'S IMPROVED WHITE CAP CORN—We have been growing this variety on our farm for fifteen years continuously, and it has received more attention and work from us than the other varieties which we handle, because we were growing this corn and improving it for our own use years before we ever thought of selling the seed. This corn at some time before we secured it was cross-bred, being a pure white and pure yellow crossed. The result is a variety with the grain mostly white, but showing a tinge of yellow throughout, cobs sometimes red and sometimes white.

This variety has been tested beside many other breeds of corn on our farm and has never been outyielded by any of them. We think that on rich ground it will probably make a little the heaviest yield of any variety that we have, but of recent years smaller foddered varieties like Clarage apparently have done a trifle better on poor ground than the White Cap. Judging from our customers' reports, however, this corn is about as sure and dependable as anything in the State, especially where one hundred and twenty days' time can be given it in which to mature.

In the variety plot last year the White Cap had a handicap of a little poorer, colder soil than some others. The yield was 99 bushels and 30 lbs. Maturity, one hundred and twenty-five days.

Ears medium to long, cob medium sized, good depth of grain, as deep as it is practical to have it in this climate and yet mature; the greater the depth, the later the corn becomes. Fodder medium, about as large as is advisable in this climate without making the corn too late. This variety will mature satisfactorily in an ordinary season as far north as latitude 41 degrees. It does very well indeed in our own latitude or south of us.



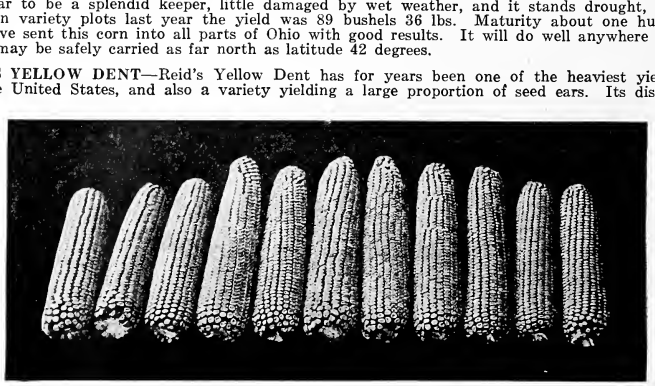
WING'S IMPROVED WHITE CAP CORN
Three acres of this variety has yielded for us one hundred and forty-seven bushels per acre.

It succeeds all along Lake Erie in Ohio. In 1908, 50 acres averaged 100.1 bushels; in 1909, 100 acres averaged about 85 bushels; in 1910, 100 acres again averaged about 85 bushels; in 1911, 85 bushels; in 1912, almost 90 bushels; last year, with very severe drought conditions, 75 bushels.; this year, with the worst drought on record here, probably 80 bushels. We find our White Cap corn to stand punishment of all sorts better than almost any other variety which matures in the same period, and believe that we will secure as great a yield as is obtainable with any other variety, either on rich or poor soil.

We do not believe in using testimonials, but a customer who won first on White Cap at the Marion County Show and second on best single ear writes that the White Cap made twenty bushels per acre more for him than any other corn he has raised. A customer in West Virginia writes practically the same thing and many others are similar.

WING'S 100-DAY WHITE CORN—This is a white corn which matures here in about 115 days. It is characterized by medium to small sized fodder, smaller than White Cap, about the same as the Clarage, medium-sized ears of great weight, and very solid. It is an excellent yielder. As stated, its ears are all medium sized, but it is a well-known fact that a large-eared corn is not necessarily a heavy yielder, and we can recommend this corn as being as heavy a yielder as any one hundred and ten-day corn which is grown in the State. It has shown itself each year to be a splendid keeper, little damaged by wet weather, and it stands drought, poor soil, etc., excellently. In variety plots last year the yield was 89 bushels 36 lbs. Maturity about one hundred and ten days. We have sent this corn into all parts of Ohio with good results. It will do well anywhere in the latitude of Ohio, and may be safely carried as far north as latitude 42 degrees.

REID'S YELLOW DENT—Reid's Yellow Dent has for years been one of the heaviest yielding varieties of corn in the United States, and also a variety yielding a large proportion of seed ears. Its disadvantages for

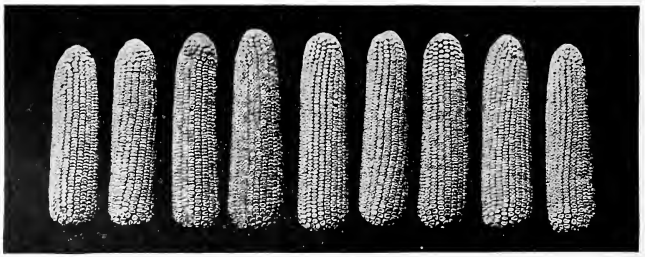


REID'S YELLOW DENT
On good ground there should be no difficulty whatever in securing a yield of 100 bushels or over of this corn.

our own section have been that it was a trifle too late, also some strains of this corn were quite shallow-grained. We are breeding a strain of it, decidedly the earliest that we have ever found, and also one whose grain suits us the best of any we have ever had.

For standing punishment we put this corn beside Wing's Improved White Cap. The fodder is medium-sized, the ears not too high on the stalk. The corn gets sound and fully matured for us each year, ripening in about the same time as our other one hundred and twenty-day varieties. We believe this corn will yield very close to any other variety that we have. The variety plot this year gave us little data, because this particular variety was subjected to more severe conditions than any other sort. It matured in one hundred and twenty days. It can be grown as far north as 41 degrees.

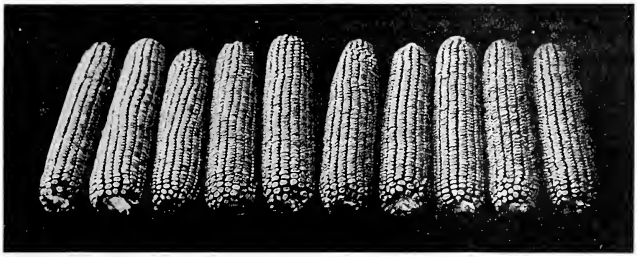
FUNK'S YELLOW DENT—This variety does not differ radically from the Reid's Yellow Dent which we are offering this year. We consider the chief difference to be in a little longer ear; that is, the ear is a trifle more slender than the Reid's, and grain is a trifle better shaped. In yield, time of maturity, and general characteristics there is little choice between these two varieties, and both of them are splendid, high-yielding sorts. The strain of Funk's Yellow Dent which we are handling came direct from Funk Bros., Bloomington, Ill., six years ago, and has been carefully selected and kept pure. In variety plot last year this variety made 92 bushels and 8 lbs. Matured in one hundred and fifteen days. This corn may be safely moved to latitude 41 degrees.



FUNK'S YELLOW DENT
There should be no difficulty whatever in obtaining on good ground a yield of 100 bushels or over of this corn.

WING'S 120-DAY YELLOW—This is our most popular yellow corn, and we consider it one of our best varieties. Placed side by side on rich ground, our improved White Cap and all of our yellow varieties yield, we believe, practically the same, the preference being slightly in favor of the White Cap. On poor soils our opinion is that 100-Day White, Clarage, and Reid's Yellow Dent might lead the list, but Wing's 120-Day Yellow excels in being adaptable to many different soils and latitudes, maturing early, and having splendid quality at all times. This corn usually matures in one hundred and ten days. Type of grain is splendid, deep enough and of excellent proportions; the proportion of corn to cob is excellent. Fodder medium sized, a trifle smaller than White Cap. In variety plot last year we secured 101 bushels 15 lbs. Matured in one hundred and five days. We believe that it can safely be moved to latitude 42 degrees.

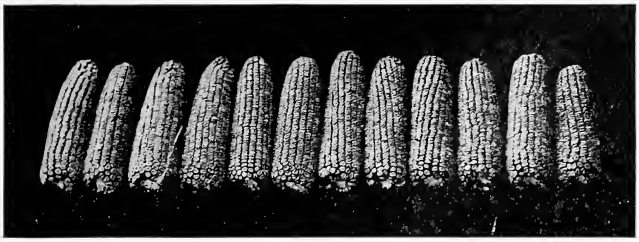
This variety has done particularly well when sent into New York State, where one of our customers wins at Corn Shows every year with it; has grown over 100 bushels per acre and is supplying school children for their corn contests.



120-DAY YELLOW
One of our customers in New York State grew one hundred and twenty bushels per acre. Some of our own fields are yielding one hundred and twenty-five, but we feel that this yield can be surpassed in Ohio, if the corn be given proper advantages.

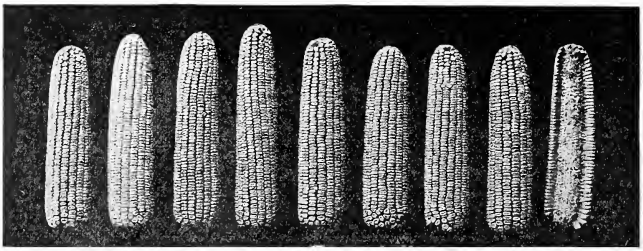
WING'S 115-DAY YELLOW—This variety we recommend to people who desire great depth of grain. In this particular we know of no breed of corn that excels Wing's 115-Day Yellow, and as a feeding corn, a heavy yielder that shows a large percentage of grain to cob, we will put this beside anything in the State. We bought the original stock several years ago as a ninety-day corn, but this corn needs about one hundred and fifteen days to mature. The fodder is medium-sized, the ears medium and heavy. In variety plot this corn made us 101 bushels. Matured in one hundred and five days. It can be safely moved to 42½ degrees.

CLARAGE—The longer we grow this variety, the better pleased we are with it. On rich ground it yields as heavily as the best of them, and on poor ground we put it beside Wing's Improved White Cap. Its ears are usually medium sized, but this has no effect upon its yield. Its fodder is medium-sized, possibly the most valuable fodder for feeding of any variety we sell. It ordinarily matures in one hundred and ten days. It is a very heavy solid corn, with splendid quality of grain, the kind of corn that shows a large proportion of seed ears. In variety plot this corn gave us a real surprise. It produced 109 bushels 36 lbs. Matured in about one hundred and three days. It is more than evident that our good opinion of this variety is justified. Will mature as far north as 42 or 42½ degrees.



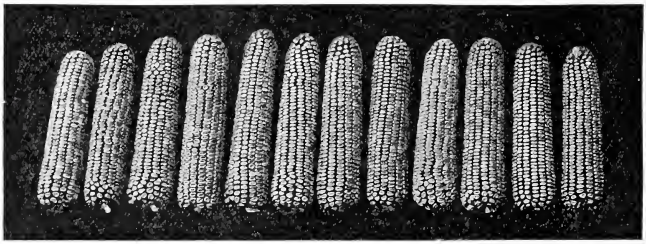
CLARAGE
This corn at present is yielding right alongside of all of our other yellow breeds.

WING'S 110-DAY YELLOW—This variety is a twin with Wing's 115-Day Yellow. Very deeply grained, although not quite as deep as the former. It will mature in about one hundred and fifteen days. Medium-sized cob, somewhat larger than Wing's 115-Day Yellow, and medium-sized fodder. This is a splendid, heavy-yielding sort, and a good feeding variety. It is a variety which we originated ourselves, and, judging from the way farmers like it, it seems likely to prove a leader before very long. In variety plot this corn made 102 bushels 41 lbs. Matured in one hundred and five days. We believe that it can safely be moved to latitude 42 degrees.



WING'S 110-DAY YELLOW

MINNESOTA No. 13—For several years we have tried to secure a pure-bred corn that was earlier than anything else we were growing, and for two years now we have worked with this variety. We find that there are several strains on the market; some of them decidedly late, but we now have a strain that is decidedly earlier maturing, our grower says three weeks ahead of other corn, and ready to husk by September 25th. We have this grown on contract in northern Ohio in order to keep it early. It shows good breeding back of it; has nice quality; is uniform in type of grain as well as fodder, and yields very satisfactorily. This corn should do well up to about latitude forty-three and one-half degrees. In variety plot this year, the fodder was five and a half feet high; the yield seventy-four bushels. North of us, particularly in latitude forty-two to fory-three and one-half degrees,



MINNESOTA 13

an extremely early corn like this is invaluable for main crop. All over the Corn Belt such corn has a peculiar value for hogging off. Its yield is good, and being ready for use three weeks before our large varieties, its value per acre at that time is decidedly greater than that of the late varieties.

We can also recommend this variety for planting in combination with Soy Beans, both crops to be hogged off together. The Ito San bean matures just with this corn and they go together better, in our opinion, than any other varieties we are selling.

CORN PRICES

We quote these varieties of seed corn in our price list. Wing's Improved White Cap is the highest because we have put the most years' work on it, and it seems to be the most valuable where conditions are proper for it.

Clarage, 100-Day White, 120-Day Yellow and Minnesota No. 13, we put in second class because we have spent fewer years' time on them.

Reid's Yellow Dent, Funk's Yellow Dent, 115-Day Yellow and 110-Day Yellow we put on the bargain list simply in order to increase our sales of these excellent varieties. There is no difference in the quality or care between any of these classes, but we are simply putting these four varieties so low that they cannot help selling.

SOY BEAN

If you will carefully study the statistics in our table of analyses, page 00, you will see why this crop deserves to take such prominence. It will then be seen that the beans have a higher protein content than oil meal, that the hay from them has a higher protein content than Alfalfa. Note also the splendid amount of fat in the grain. Add to this the fact that with the new varieties it is easily possible to secure two ot three tons of dry hay per acre; that from twenty to thirty bushels of seed per acre are frequently reported; that the plant is a legume and adds fertility to the soil fully as rapidly as the clovers or other legumes; that it will grow on soil too poor or acid for the easy success of Alfalfa; and you have a splendid combination, certainly qualities that are hard to excel with any of our cultivated crops.

We know of no plant having a wider or more useful range of possibilities than the Soy Bean. When one stops to think of the great feeding value of the grain, of the entire plant's being very valuable for forage, of its being a legume and a heavy gatherer of nitrogen to the soil, and that it is by no means difficult to grow nor exacting as to the kind of soil it requires, he is bound to realize that it occupies a position unique among all our crops. Not only is the grain as nourishing as oil meal, but it is as greedily eaten as corn, and as easily digested as any grain we have ever fed. Moreover, there seems to be a tonic effect about the entire plant, and stock fed either the grain or the forage become full of life and energy as with no other grain that we have ever used. As a hay plant it certainly deserves to compare very favorably with anything that we are now growing, expecially so when the best of the new varieties are used. These are not only large enough to produce a great quantity of feed, but the stems are fine enough so that there would be less waste than with most of the old varieties. Also the habit of the new varieties is much superior to that of most of the old ones, the plants standing erect and being easily cultivated and easily harvested.

In habit the Soy Bean is very far superior to the cow pea, the latter being recumbent and difficult to cultivate and to harvest. As a nitrogen gatherer we are sure the Soy Bean has no superior, when inoculated and where a crop to plow under is desired nothing is better to add humus to the soil. In this connection please note our statistics in Tables 1, 2 and 3, on pages 26 and 27.

SOY BEAN, WING'S MIKADO

It is not recommended for sileage when used alone, but in combination with two parts corn to one of beans can be thoroughly recommended, the beans greatly assisting to make a balanced ration. We expect a yield of about ten tons per acre when cut for silage.

When all these facts are considered, and also that it will grow on either fertile or impoverished soils, either limestone or freestone, that while it is not quite a "lazy man's crop,"it is not particularly difficult to handle, its high value will be fully realized.

Many times a meadow winter-kills, and we need a catch-crop to supply additional hay. Millet has been largely used in the past for this purpose, but Soy Beans mature so quickly that they may be sown at the same time that you would sow millet and the hay secured from them is so very much more valuable than millet hay that there is no comparison between them. One hundred pounds of Soy Bean hay contains twice as much protein as the same amount of millet hay.

Today we are as certain of the value of the crop as we ever were, and having grown them on from one hundred to one hundred and seventy-five acres during the past two years, we can state authoritatively their advantages as well as their weaknesses.

We find the plant to be just as valuable as we thought it was. Our experience also decidedly confirms what we have been telling our customers for some years: that there is a wide variation between different varieties of the beans; that some are much better adapted to different purposes than others, and that some are much better adapted to certain soils than others. Under our variety descriptions we fully state the characteristics of each variety which we are selling. We think it entirely possible that different varieties will thrive better in different parts of the country. One reason why we think this is that for several years we conducted experiments with different varieties which we secured ourselves from various parts of the country and also with some secured from the Government at Washington. Repeatedly, varieties which were particularly good in the Government tests were unsatisfactory with us. Occasionally a variety which the Government thought was moderately good has proven to be very valuable with us. Some varieties seem to be real general-purpose sorts, that thrive on a diversity of soils, giving satisfaction, to our knowledge, in various States. Our experience when growing the beans for grain is that poor ground is all right; that they will make a large yield of grain, although not always much forage. When grown for forage we would select certain varieties, described later, and preferably put them on fairly good ground; in fact, the richer the ground, the more forage will be obtained. Certain varieties seem to make splendid yields on poor soils, while other varieties do not stand poor soil well.

As a forage crop we believe the soy bean will become decidedly popular, especially where clover meadows for any reason have failed, and a substitute for them is needed. The yield of hay from the Soy Bean should be nearly or quite equal to that of clover, and the chemical analysis shows the bean to be fully equal to the clover. The only disadvantage with the bean is that it is more difficult to to cure than clover, and you cannot expect a second crop, as we do with clover. This second crop, however, can easily be supplied by mixing winter vetch with the soy beans when planting, as described in a later paragraph.

ITO SAN
FULLY RIPE AND READY TO HARVEST

The photographs of Wing's Sable, Jet, Peking and Wilson, as shown in this catalogue, were taken primarily to show the character of these beans as a forage crop, and not as a grain crop. Note the fineness of the stems, the leafiness, and the erect habit of the plants, which makes them easily grown and harvested.

What will surprise the grower of soy beans as much as anything is the splendid value of the hulls and stalks after the grain has been threshed. One year we fed a quantity of these hulls to the cows and sheep, giving at least one feed a day of the hulls and one feed of good clover hay. Both the cows and sheep preferred the hulls to the clover hay and ate them and the stalks, dry and woody as they seemed, fully as well as the clover, with as little waste. We were surprised ourselves at this, because the plants shed their leaves before ripening, and the threshed straw and pods do not look particularly palatable. After feeding in connection with hay for a few weeks, we allowed the cows to run to a stack of the bean straw, and our man noted an increase in the milk as soon as they made this change.

SOYS IN CORN

Many of our customers have been anxious for several years to grow Soys in with corn, either for silage or for hogging off. To test this out this season we put out a test plot and we find that the Ito San Soy, grown with Minnesota No. 13 Corn, does satisfactorily, both ripening together, and they should make an excellent combination for hogging off together. For silage purposes the beans grown in with the corn were not so satisfactory, as the corn shaded the beans entirely too much, and where this kind of silage was wanted, we would advise growing the corn and beans separately.

We would not think we were fair to our customers if we did not state the dangers of a new crop as well as its good features. One of the greatest difficulties with Soy Beans is to get a perfect stand. Seed is viable for only two or three years. The seed heats very easily, and the result of these two things is that sometimes seed is planted that is dead. On heavy clay ground a driving rain forming a crust makes it very difficult for the seed to come through, and finally if the seed is planted more than one-half inch deep our experience is that the probabilities are that there will be a poor stand.

To avoid these troubles plant only good viable seed on well-prepared soil, not over one-half inch deep, lightly covered, never rolling unless on light black ground. The black beans may be planted in cold ground sometimes as early as April 15th. The yellow beans will rot unless the ground is warm. Do not run a weeder over your field while the beans are germinating and coming up, as it is inclined to break the cotyledons and thus kill the plants. Do not let the crop get too ripe before harvesting for seed, especially with the Medium Green variety. Our other varieties will not shatter near so badly, but it is better not to let any of them get too dead ripe before cutting. Handle when the dew is on. One year Soys following Soys did very poorly. Since that time we have recommedned a rotation rather than continuous cropping with this plant.

TIME OF PLANTING AND CULTIVATION—Soy Beans are not a lazy man's crop. If our instructions are carried out, however, there is little need of even partial failure. Plow your land early in the spring, if possible, selecting soil that is not too foul with weeds. Prepare as for corn, giving frequent harrowings to kill the weeds as they appear. The ground should be a little warmer than for corn, and, therefore, we wait until immediately after corn planting time before seeding the beans, say about May 20th, although most of our varieties will mature seed in ordinary seasons if planted any time before June 20th.

A machine that leaves the ground in almost ideal condition for sowing Soys is the double-gang clod pulverizer, manufactured by the A. A. Dunham Co., Berea, Ohio. It packs the surface a little and pulverizes the clods in a remarkable manner.

We advise planting in drills about thirty inches apart, and one plant every two or three inches in the drill, which, we think, makes an ideal stand; as every seed will not produce a plant it is wise to sow the seed a little closer than this. Nothing is gained by having the rows too close together or planting too close in the row, as they crowd each other like weeds.

SOY BEAN, WING'S MIKADO

To determine the advisability of planting Soy Beans solid for hay, we sowed two fields in this way the past season, and our experience leads us to believe that on very clean ground that is not likely to suffer from drought this method, by saving cultivation, will be satisfactory, although we do not think that the yield of forage was much greater, or of better quality, than when seeded in drills and cultivated. On ground that is at all weedy do not attempt to sow broadcast, as the weeds will surely choke the beans.

For planting we have been using a Black Hawk planter with bean plates and a Superior grain drill, both with comparatively good results. We prefer the latter method, especially since it enables us to plant three rows at once, and to inoculate at the same time, putting our inoculating soil in the fertilizer box, stopping all but three of the outlets, and thus dropping what inoculation we want in the bottom of the furrows along with the beans, where it is immediately covered. This method reduces the amount of soil required to about thirty pounds per acre, and we secured the most perfect inoculation we ever saw by its use.

While, as stated, most of our varieties will ordinarily produce seed if planted up to June 20th, we advise planting as near May 20th as possible. If your soil is in nice condition, and the weather warm, they will come up quickly ahead of the weeds and before the ground has time to crust. If sown in cool weather the ground is very likely to crust before they will come through. Just as soon as the plants appear above ground cultivation must begin, because it is important that the weeds be kept down while the plants are young. Cultivate as you would corn. We use a Buckeye pivot beam two-horse cultivator, which is by far the best machine for this purpose which we have ever seen. The plants need about as many cultivations as corn does, but the cultivations must be given while the plants are young. It is all right—in fact it is wise—about the second cultivation to throw quite a little earth to the row in order to smother the weeds. After the second cultivation practice absolutely level cultivation, trying to leave the ground as little ridged as possible, not only for the good of the growing plants, but in order to make harvesting easier. As soon as buds appear cultivation must cease. We do not even allow weeds to be pulled after this time

SOY BEAN, WING'S SABLE

INOCULATION—A study of Table 1, page 26, ought to be convincing as to the advisability of inoculating this plant. Note the very great difference in nitrogen draft between the inoculated and not inoculated beans. As a rule, Soy Beans do not carry their own inoculation.

Growing them several years on the same ground does not even seem to get the inoculation. Unlike Alfalfa, they will grow and even thrive apparently well enough without inoculation, and without developing nodules. They will yield a good quantity either of forage or grain without inoculation, but they are certainly drawing their nitrogen from the soil when they do this, and for the good of the soil we simply must get their bacteria to them. It is also more than probable that without inoculation the analysis of the plants will be lower in protein than when they have inoculation, and that the yield of both grain and forage will be somewhat larger when inoculated than when not inoculated. Some farmers have the notion that Soy Beans do not benefit the soil like other legumes. This idea we think they have obtained almost entirely as the result of growing the beans without inoculation, our own experience being that they do bring the soil up remarkably. Soil from an old Soy Bean field is much more certain than any other method. We have many requests for soil from our fields, and always refuse to sell this.

We can furnish Nitragin artificial inoculation for Soys at $2.00 per acre; five acres for $9.00.

Soil for inoculating Soy Beans may be obtained from A. A. Parsons, Plainfield, Indiana, at a cost of 75 cents per 100 lbs. The farmer's Exchange of Schellburg, Pennsylvania, also has it for sale.

HARVESTING FOR GRAIN—When the beans begin to ripen nearly all the leaves will fall. This year we had a splendid success by beginning to cut when the upper half of the stalks showed dry pods, the lower half of the pods being still green.

We used this year almost exclusively a McCormick self-rake, and we now believe that properly handled this is the ideal machine for harvesting them. It gathers them into bunches, dropping at the driver's will, and lays the bunches in the center, where neither horses nor wheels can run over them; consequently there is no shattering. The only place that this machine will not work is on wet ground, or where the beans are very short, when they must be either mown with a mowing machine or pulled by hand. Harvesting at the stage we did ours this year, we could run the machine all day and cut about fifteen acres. We shock them immediately if they seem dry, or if quite green we let them stand about two days. We shock in small shocks, and let them stand about two weeks, when, with favorable weather, they will do either to thresh or put into barn or stack. When threshed for grain alone an ordinary threshing machine with the concaves removed will do the work fairly well. This machine, however, will split a great many beans, and when desired for seed a regular bean thresher must be used.

Cut for hay we recommend beginning when the beans have formed in the pods and are as large as sweet pea seed. If allowed to become too ripe the plants become more woody and there is also a little danger of full-sized green beans molding in the pods.

SOY BEAN JET

MAKING SOY BEAN HAY—September is the most satisfactory month for making Soy Bean hay. Begin cutting as soon as the dew is off the plants and continue the rest of the day. Let the plants lie in the swath until the leaves are well wilted, but rake them before the leaves become dry and brittle. They should be left in the windrows for a day or two, then put in small cocks. Three to six days of good weather are required for making Soy Bean hay. The hay when dry should be placed in good-sized stacks or under a shed. When stacked in the open field the hay should be protected by grass or canvas covers, as it does not shed rain well.

Each year convinces us more and more of the advantages of the best varieties. We have now tested out practically all of the new Government varieties as well as all of the old standard kinds, and we believe that we have retained all the varieties that will give the best results in the Corn Belt.

Each year we continue testing any new variety that promises even to equal our own, but each year convinces us that we are already offering our customers the very cream of Soy Bean varieties adapted to the Corn Belt.

We believe that we are the largest retailers of Soy Beans in the United States. Possibly we retail as many as all the rest of the dealers put together. We believe, also, that we are spending more money to test varieties of these beans to ascertain which are the good ones, and to perfect them, by plant row breeding and selection, than any other firm in the United States. We think that we can see decided improvement in our varieties from the breedng work which we have done with them.

WING'S MIKADO—A splendid variety, a little better adapted to grain than hay, as the stalks and branches are a trifle coarse. On moderately good ground we think this variety will yield as heavily as any which we have as yet tested. It will also stand poor ground better than many other varieties, but succeeds best on moderately strong ground. The habit is splendid, plants perfectly erect, leafy, branching. Height two to three feet; will mature in one hundred and twenty to one hundred and twenty-five days. Sow about twenty pounds seed per acre. This bean has a record in test plot of thirty-seven bushels per acre, and in the field will make thirty bushels under favorable conditions.

WING'S MONGOL—A variety secured in 1908. This bean is very similar to Wing's Mikado, a remarkably heavy yielder of grain, the sturdy stalks making it more of a grain than forage variety. It prefers a moderately strong soil; on such soil it will yield as heavily as any variety which we have tested, but it will not stand really poor soil particularly well. It matures in about one hundred and fifteen days. Sow twenty pounds seed to the acre. We believe this bean will make thirty bushels to the acre under favorable conditions.

WING'S SABLE—A remarkable variety, secured by us in 1908 and considerably improved by us since that time. It does practically as well for us on one kind of soil as on another, will yield well on poor soil and does splendidly on rich soil. The habit is perfect, plants perfectly erect, pods forming well off the ground, thus allowing easy harvesting, the branches and stalks when only a few inches above the ground becoming slender, making the bean admirably adapted to forage if desired. We believe it entirely practical to obtain a yield of thirty bushels per acre on a large acreage of this bean. It requires one hundred and twenty days to mature. Sow about fifteen pounds seed to the acre.

A FIELD OF WING'S EXTRA SELECT SABLES. THE TALL PLANTS WHICH THE CHILDREN ARE HOLDING ARE WING'S ROYAL, A FORAGE VARIETY GROWING SIX FEET TALL, WHICH WE WILL BE READY TO MARKET IN 1916

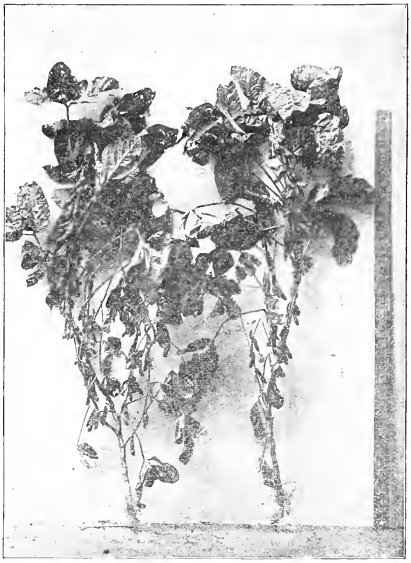
WING'S EXTRA SELECT SABLE—This stock is all grown from tested plants which made a high yield in test plot. In variety plot it outyields the ordinary Sable by not less than two bushels per acre, and in addition it grows a few inches taller, making it better adapted for forage. We are also now developing a special forage strain of Sable which this year grew for us over 5½ feet tall. The seed of the forage strain will not be on the market for at least one year.

JET—Has a test plot record of thirty-two bushels per acre. A variety splendidly adapted to forage, and reasonably good for grain, requiring about the same soil as the Peking, that is, just moderately fertile. Habit is good, not quite so perfect as most of our other varieties. Matures in about one hundred and fifteen days. Requires about eighteen to twenty pounds seed to the acre.

We recommend this bean as an early sort, well adapted to Michigan, Northern Ohio, New York State, etc., where it is already giving excellent results.

WILSON—This variety in some ways excels all our others as a forage bean. On very rich soil we have seen it grow eight feet tall. The stalks and branches are slender, and on rich soil become somewhat vining at the tips. We think probably it would make a little the most hay, and a little the best quality, of any variety which we handle. Up to this year it has been an unsatisfactory grain producer, but this year did better, and it is possible that we are getting it acclimated. It stands poor soil about as well as any variety which we have tested, but when grown for forage we would put it on the best ground. Requires about fifteen to eighteen pounds seed per acre. Matures in about one hundred and twenty-five days.

ITO SAN—An old standard variety, one of the first and best sorts grown in the United States. Especially adapted to latitude 41½ degrees, or north of that. A heavy yielder of grain, should make twenty bushels per acre; not particularly suitable for hay on account of not making as much of it as the other varieties we sell, but quality of hay would be all right. Would probably make one to one and one-half tons per acre. Habit not as good as with our other varieties. It will mature in about one hundred and five or one hundred and ten days. Sow twenty pounds seed to the acre.



SOY BEAN, WING'S MONGOL

SOY BEAN, WING'S SABLE

We have repeatedly tried every other valuable early bean, trying to see if there was one as early as the Ito San that was also better, but up to date we find no other sort of bean maturing at the same time that quite equals it.

MAMMOTH—The mammoth Soy Bean will rarely mature seed north of the Ohio River, but we handle southern-grown seed, as some of our customers desire it. This bean is satisfactory for ensilage and all right to plow under. It would not be nearly so good as our Sable, Jet, Peking or Wilson for hay.

OHIO No. 9035—Originated by the Ohio Experiment Station, and by our tests the best bean that they have put out. It is similar to our Mongol and Mikado in every way, and in our trial grounds yields about the same; matures in one hundred and fifteen to one hundred and twenty days; requires twenty pounds seed per acre.

MEDIUM GREEN—We list this variety, not that we consider it equal to many of our other sorts, but because there is a demand for it. It has good habit; is similto our Mikado in this; the seed is green, about the same size as our Mikado, and the yield, according to our trial grounds, is about the same. As a forage bean it is just about as good as our Mikado. When harvesting for seed it absolutely must be cut rather green, as it is decidedly the worst bean we know of for shattering when harvesting. If harvested too green the seed will heat and spoil; if allowed to become the least bit too ripe most of the crop will be lost from shattering.

FIELD OF OHIO 9035 SOYS

CLOVERS

Red clover seed is often badly mixed with injurious weeds, such as buckhorn, plantain, dodder, etc. Great care should be exercised in purchasing clover seed, since life is too short to be spent in eradicating unnecessary weeds.

We handle an export grade of red clover, which we call our W. B. brand. It is of a quality so superior that we are forced to ask a rather high price for it, but there are very few seedsmen handling anything as good as this is. Many of our customers have been surprised when they saw our seed, and they have stated to us that they have never seen any clover seed as good as ours.

MEDIUM RED CLOVER—Biennial, 2 to 4 Feet—This is the common or medium clover, the one most universally grown throughout the country. On fertile soil, and especially where hay is desired, it has only one superior, and that is Alfalfa.

MAMMOTH CLOVER—Biennial, 2 to 4 Feet—For impoverished soils, or for pasturage, we think this variety excels the medium. On impoverished soils it does not grow too rank or coarse, and in a pasture it retains its greenness throughout the summer much better than the medium does and also furnishes a larger amount of forage. It is also better adapted to fertilizing the soil than the medium, as it grows much ranker and coarser, making more to plow under. It is not nearly so valuable for hay when grown on fertile soil as the medium, because it is too large and coarse.

ALSIKE CLOVER—Biennial, 1 to 3 Feet—This plant ranks nearly as valuable as the medium for ordinary soils, and in special conditions is much better. The plants are smaller, and ordinarily it produces a somewhat lighter crop than the medium, but, as it is also much more closely eaten by stock, there is less waste. The quality of the hay is better. As the plant is a perennial, while the medium is a biennial, it makes more of a permanent meadow or pasture plant. It succeeds on impoverished soil or acid soil better than the medium, and on wet soil it is invaluable. It will not, of course, grow in water, but will stand more moisture than the other clovers. It is fibrous-rooted and will not heave out in winter.

WHITE CLOVER—Perennial, 4 to 9 Inches—This is the common little running clover found in most good pastures. Its chemical analysis shows it to be richer in protein than almost any other legume which we grow for forage. It is, of course, too small to grow for hay, but it is invaluable in all pastures, and no pasture mixture would be complete without it; in fact, we can thoroughly recommend discing old blue grass pastures and sowing a mixture largely composed of this clover to improve both quantity and quality of the pasture.

CRIMSON CLOVER—Annual, 1 to 3 Feet—Throughout many sections of the country this plant has accomplished wonders, principally in building up poor soils. Its usefulness is mostly confined to its fertilizing value, as the hay is not very well relished by stock, although if cut green it makes a fair quality of hay. In the Atlantic and Southern States its usefulness can hardly be overestimated, as it has redeemed thousands of impoverished fields at an extremely moderate expense. It is usually sown in the fall, allowed to come into bloom, which it does quite early in the summer, then either cut for hay or plowed under, and another crop grown the same year. It could be sown in the spring, when it would mature a crop before fall.

MELILOTUS OR SWEET CLOVER

Annual or Biennial, Height 1 to 9 Feet.

We are glad to note that farmers generally over the country are changing their views with regard to this plant. A few years ago it was usually regarded as a pest; then we found that it was a very valuable crop for fertilizer, and finally we have demonstrated without a chance of contradiction that it is a valuable pasture and hay crop, and thousands of farmers so regard it today. We are growing it ourselves on our own farms, and we see no good reason now why it should not take a strong position in permanent agriculture within a short time.

SOY BEAN JET

There are three species: the Melilotus Alba, Melilotus Officinalis and Melilotus Indica. The Alba is the species most widely distributed and the most valuable one. On ordinary soils it grows six feet tall. Its blossom is white. It is biennial, the hardiest and sturdiest of the three varieties.

Melilotus Officinalis is biennial, has a yellow blossom, ordinarily grows about four feet tall. Both these varieties are used for hay or pasture, but the Alba is preferable because stock will not bloat on it, while they sometimes will on the Officinalis. Also the Alba is a heavier producer both of foliage and seed, and more certain than the Officinalis.

Melilotus Indica is annual and has a yellow blossom. It ordinarily grows one to two feet tall. Its value is entirely as a fertilizer.

South of the Ohio River, or especially south of the Kentucky line, this is a valuable winter cover crop, but north of this line it has little value; winter kills and it is disappointing. It might be used to inoculate for Alfalfa, sown early in the spring and plowed under by fall. The seed is very cheap and for this purpose it might be reasonably satisfactory.

Now, just a word to the men who are still skeptical about the usefulness of Melilotus as a pasture or hay crop. Stock do have to learn to eat this plant; but turn them on it, if it is pastured, early in the spring when green stuff is just starting, and see how quickly they learn to eat it, and how greedily they eat it all the rest of the season. This is the way we do. Our stock keep it grazed right down to the ground, leaving rank blue grass close beside it, just as long as they can get a mouthful of the Melilotus. When you cut it for hay do not let it get too ripe.

Melilotus analyzes about the same as Alfalfa, and is a very heavy producer of forage. Our experience is that probably no legume which we have today will furnish more pasturage, and it also produces large amounts of hay. We pastured fifty-six hogs, averaging between one and two hundred pounds, on an acre for six weeks, turning on it when about three feet high, and in that tine they ate it down to about fifteen inches. Our stock have to learn to eat the hay. It requires a few days' time to do this, but our work horses and our cows eat it as greedily as they do Alfalfa as soon as they learn the taste of it. There is no more waste noticeable in feeding it than in feeding the best clover hay. Of course, we take care of the hay, cutting it before becoming too ripe, saving it with the leaves on, in short, giving it the same care and attention that we would any other hay plant.

SEEDING MELILOTUS—Melilotus, when once established, will grow on decidedly poor ground, in this respect being superior to Alfalfa and other clovers, but it is a mistake to think that it is remarkably easy to establish a stand of it. We have had no trouble ourselves, but other farmers assure us that in some ways it is more difficult to get a stand than it is with Alfalfa and other clovers. With our experience, we have seeded either with oats or barley, which we cut for hay, or with light seeding of oats and Canada peas, which we pasture off, and we have had no trouble with either method. There is one absolute necessity: Melilotus requires as much lime in the soil as Alfalfa itself. It needs inoculation about as badly as any legume we know of, and this should always be supplied to it. We have seeded in April, May, June, July and August and October, and have succeeded with every seeding. We slightly prefer April or October seeding.

Melilotus requires a considerable amount of moisture for proper germination. April seeding succeeds for this reason. October seeding is meant to lie on top of the ground all winter, subjected to the softening effect of cold and moisture, and in our tests we have found that when the frost left the ground in the spring this seed would swell nicely. The spring freezes would barely cover the seeding, and when warm days came it would come up remarkably well. This is nature's own method of seeding and possibly the best yet discovered.

After the plants are two inches tall they stand drought remarkably well, in this particular resembling Alfalfa, and succeeding much better than medium clover. There is one point that is firmly impressed upon us, that Melilotus seed must not be deeply covered; a half-inch is plenty. Have your sub-surface firm; this will help prevent too deep seeding. Fields that are too mellow, even when presenting the appearance of a perfect seed-bed, are likely to give too deep a covering and to succeed much less satisfactorily than harder fields where your covering is light. On this account we can recommend double-discing stubble ground, preparing a mellow surface an inch deep in preference to plowing the ground and having a mellow surface four inches deep. Also, for this plant we can recommend the special Alfalfa drills, which enable you to sow just as shallow as you wish to and still to cover the seed.

Except for October seeding we use just about the same methods that we would in seeding Alfalfa as to preparation of seed-bed, amount of seed per acre, depth and manner of planting, nurse crop and fertilizers, and so far our experience indicates that the two plants are enough alike so that this is a good system.

SEED—Until the past year or so it has been almost impossible to secure proper seed of Melilotus, but it is a trifle easier now. Originally this seed was gathered by very primitive methods. It was left unhulled. It frequently heated, and the unhulled seed containing quantities of immature seed showed very low germination. There is a great deal of unhulled seed sold now, but our experience with it has been such that we refuse to handle it at all. The hulled seed will usually give good results, although Melilotus naturally contains more hard seed

which refuses to take up water, and which germinates three or four months or a year after being seeded, than any other legume that we know of. We advise using twenty pounds seed per acre, and using nothing but the hulled seed.

HARVESTING FOR HAY—The biennial varieties of Melilotus seeded in April should make one light cutting of hay the first year and probably two the second year, when it seeds. The rule with regard to cutting Alfalfa, that of watching to see that the buds have started from the crowns, is even more applicable to Melilotus than to Alfalfa.

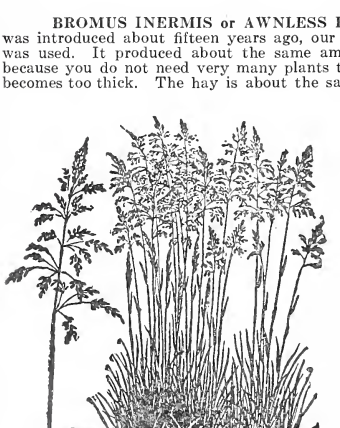
We have never as yet cut our Melilotus fields the first season, even if they were seeded in the spring, although it is said that a light crop of hay can usually be removed without injuring the plants. The second year a very satisfactory crop of hay can be removed about June 1st, when coming into bloom, but you must cut the plants eight inches or a foot high, or else you will kill them at this time. After removing this hay crop a second crop of moderate size may be secured, or a moderate-sized crop of seed. To obtain the maximum crop of seed it is recommended not to cut any hay off at all. Cure the hay much as you would Alfalfa, raking before the leaves become dry enough to shatter, then placing them in moderate-sized shocks, and forgetting about them for a week or ten days, when they will be in good condition to go into the barn. It is not necessary to try to cure in the swath or windrow, or to go to a great deal of labor opening out the shocks, etc.; just shock it up before it gets too dry, and leave it alone for at least a week.

HARVESTING FOR SEED—We think we have learned how to harvest Melilotus Alba for seed. Crops of ten bushels per acre have been claimed, but we are a little skeptical; splendid-looking fields of ours making four or five bushels only. Our method is to cut when about three-fourths of the pods have turned brown. We use a McCormick self-rake very satisfactorily. We work only when the dew is on. We let it lie in the bunches deposited by this machine for a week or two, and prefer a shower before threshing. We thresh with an ordinary clover huller and have no difficulty whatever.

MELILOTUS AS A FERTILIZING PLANT—Some of our customers have poor fields which are so thoroughly worn out as to become unprofitable, and they want a crop that will add fertility to these worn-out fields with a minimum of labor. The Melilotus Alba is peculiarly well adapted to this purpose. By consulting Table 2, page 00, you will note one fact, that our estimate makes this the greatest fertilizing plant that we have, and we think actual results, expecially where the land can be turned over to the crop for at least two years, will bear this theory out perfectly. Once established it will reseed itself, both roots and top in their decay adding nitrogen to the soil, and no attention need be paid to the field after the plants are once established until it is desired to plow it for some other crop. These worn-out fields must, of course, have enough lime, or else the Melilotus will not live. It would also be very wise to add liberal amounts of phosphorus, as the Melilotus cannot do this, and the application of phosphorus would also feed the Melilotus, producing a considerable larger crop than would otherwise be obtained. It is possible that Winter Vetch could be seeded with the Melilotus, but that it would reseed itself, although our own experience with the Vetch in reseeding itself has been decidedly disappointing.

GRASSES

BROMUS INERMIS or AWNLESS BROME GRASS—Perennial; Height 3 to 5 Feet—This valuable grass was introduced about fifteen years ago, our own farm being one of the first places in the United States where it was used. It produced about the same amount of forage as timothy; is somewhat more reliable than timothy, because you do not need very many plants the first year. It will thicken up rapidly, and in a meadow eventually becomes too thick. The hay is about the same as timothy, although on our own farms we rather prefer the Bromus. As a pasture plant it is decidedly valuable; it comes on early in the spring, does not become particularly woody at any time during the summer, stays green and succulent, and is greedily eaten by live stock. In fact, the one disadvantage about it is that stock like it too well and in time, if closely pastured, will gnaw it out and kill it. It stands drought very well; does well on either poor or rich soil, and is one of the best grasses we have ever used on low, wet, or mucky soils. Several years ago all commercial samples of this grass were found to contain quack grass, and we refused to handle it at all, but we have secured a moderate amount of seed which was grown especially for us from pedigreed seed, that is absolutely free from quack grass, we believe the only such seed that can possibly be obtained in the United States. We slightly prefer sowing this grass in the spring, using ten or fifteen pounds seed per acre.



KENTUCKY BLUE GRASS

KENTUCKY BLUE GRASS—Perennial; Height 10 to 15 Inches—This is too well known to require description. We recommend sowing (if alone) about forty pounds per acre.

CANADA BLUE GRASS—Perennial; Height 6 to 12 Inches—Succeeds on soil too poor for Kentucky blue grass. It is well relished by stock, and expecially recommended for cows. It should form a portion of the mixed grasses for permanent pastures in most parts of our country. Sow (if alone) about 40 pounds per acre.

ORCHARD GRASS—Perennial; Height 12 to 30 Inches—This grass is invaluable for pasture, but not very well suited for meadows. It will stand more abuse, hard tramping, poor soils and drought than any other grass which we handle. It starts early in the spring and furnishes green pasture among the earliest of our grasses. In the middle of the summer a pasture of it should ordinarily be mown, as it tends to become woody, and after mowing it will start up fresh and green and make abundant fresh pasture. It also thrives exceptionally in shady places.

It is nutritious feed and if properly handled will be readily eaten, although after it becomes woody stock usually prefer other grasses to it. Sow in the spring twenty to twenty-five pounds per acre in well-prepared soil, covering lightly.

TALL MEADOW OAT GRASS—Perrenial; Height 2 to 5 Feet—We find this to be one of the most useful of the new grasses, and we are decidedly well pleased with it, either for hay or for pasture. As a hay plant it compares favorably with timothy; as a pasture grass it compares favorably with Bromus Inermis. It stays fresh and green when many other pasture grasses are dried up. It stands punishment well, is especially adapted to poor soils, to sour soils, and to heat. We have found it one of the best grasses for the Southern States. Sow forty or fifty pounds to the acre.

ENGLISH OR PERENNIAL RYE GRASS—Perennial; Height 15 to 24 Inches—A valuable grass for permanent pastures, or for lawn mixtures. It produces an abundance of fine foliage, forms a compact sward, and remains bright and green throughout the season. If cut while in bloom it is a nutritious variety for hay, although it becomes woody later. Thrives best in soil that is not too dry. Sow (if alone) sixty to seventy pounds per acre.

RED TOP—Perennial; Height 1 to 2 Feet—So well known as to hardly need description. It is often sown with timothy and red clover to make a heavier yield of hay. It prefers moist, rich soil, on which it should reach a height of from two to two and one-half feet. It is also recommended in parts of the country as valuable grass for permanent pastures. Sow (if alone) about ten pounds per acre.

MEADOW FESCUE—Perennial; Height 18 to 24 Inches—This grass is one of the most reliable and dependable for a wide range of territory of any that we have, and will compare both in yield and feeding quality with any other grass grown in America. In yield it would probably be a little less than Bromus Inermis, in feeding quality about the same. It is well relished by live stock, succeeds all over the Corn Belt and New England States, and is especially adapted to wet soils. Sow (if alone) about fifty-five pounds per acre.

TALL MEADOW FESCUE—Perennial; Height 3 to 4 Feet—A similar grass to Meadow Fescue, although a little more valuable, as it makes a little more feed and seems to be just as palatable. Is adapted to the same purposes as the Meadow Fescue. Sow, if alone, about thirty-five pounds per acre.

RED OR CREEPING FESCUE—Perennial; Height 2 to 2½ Feet—This grass is recommended on account of its ability to withstand drought. It roots deeply in the soil, and remains fresh and green when other grasses are apparently dried up. It yields a good bulk of herbage of fair quality. It is most nutritious at time of flowering. Sow (if alone) about thirty-five pounds per acre.

SHEEP'S FESCUE—Perennial; Height 6 to 20 Inches—This grass is especially recommended for good upland or dry pastures, and for sheep grazing, being very much relished by them. It is slightly deficient in quantity of forage produced, but it is so nutritious as to counterbalance this deficiency. It is also recommended for lawn mixtures. Sow (if alone) about thirty pounds per acre.

TIMOTHY—So well known as to need neither description nor recommendation. We handle only the very best seed, an export grade sold by few other firms. It is generally best to sow it at wheat-seeding time. Spring seeding in this vicinity or this latitude is not so certain as the fall seeding.

THEORY OF MEADOW AND PASTURE MIXTURE—Mixtures are absolutely all right. Two grasses grown together will nearly always yield more than when they are grown separately. Three or more grasses will nearly yield more than two grasses, or more than when all are grown separately. Furthermore, two or more grasses grown together exhaust the soil less rapidly than one grass grown alone. Upon these principles rests the entire theory of all mixtures. For example, timothy and medium red clover grown together will make a larger yield than either one grown singly; the addition of red top will still more increase the yield; the addition of alsike will still further increase it and improve the quality as well.

TEMPORARY MEADOW AND PASTURE MIXTURE—Meadows intended to be plowed up in three or four years' time will yield more and better feed when a mixture is used than when one grass is sown alone. The same theory applies to this that applies to all other mixtures.

If you care to avail yourself of our knowledge and experience in this matter we will be glad to make special meadow mixtures for either moist or dry soils, for limestone or freestone soils, and to make mixtures containing either a preponderance of clover or a preponderance of timothy with some clover. We will make the same rule about this that we make about our other special work, and will decline to make special mixtures during our rush season (March).

PERMANENT MEADOW AND PASTURE MIXTURES—We make a specialty of meadow and pasture mixtures. This our practical knowledge of the subject enables us to do.

We have carefully studied all the grasses, and the clovers especially, for many years. We have studied them not only at home, but in all sections of the country. We feel entirely competent to make mixtures for any purpose, and have furnished them for a number of large estates in different parts of the United States.

We have some demand for permanent meadow mixtures, but have not handled these heretofore, because we thought the principle bad; that meadows should not be left in permanently; but where it is desired to cut for hay for one or two years and then turn into a pasture, as many farmers wish, the idea is all right, and this year we are preparing mixtures for this purpose. Our dry and moist permanent meadow mixtures are designed for this purpose. We do not sell or recommend any mixture which is expected to be cut for hay for more than two or three years at the outside. Alfalfa can be cut for more years than this, but no mixture with which we are familiar can be recommended for this purpose.

Upon request, and upon receiving careful description of your soil, we can vary these mixtures to meet special requirements, and are glad to do so without extra cost. However, if you want special mixtures, by all means give us your order before the rush season, because we have all that we can possibly do with our regular work at that time, and cannot possibly get out special mixtures.

DRY AND MOIST PASTURE MIXTURES—The expense of having this mixture amounts to little more than where you have only two or three kinds of grasses. For ourselves, we would never be contented to see a pasture without having a large amount of clover added to the mixture. The several different varieties of clover are well adapted to this use, and not only do the stock thrive on them, but they enrich the soil at the same time and actually stimulate the other grasses. We prepare a dry pasture mixture and a moist pasture mixture. These mixtures both contain the proper amount of clover and also a large variety of the finest pasture grasses. Upon request we will make this mixture in any proportions which our customers desire and from any varieties of grasses found in our catalogue. If you desire any special mixture or any special proportions, write us before you are

ready to order and we will estimate the cost. Where it is left to our judgment we will use in the Dry Pasture Mixture the following varieties of seed: Timothy, Medium Red Clover, Mammoth Clover, White Clover, Melilotus, Orchard Grass, Tall Meadow Oats, Tall Fescue, Creeping Fescue, Sheep's Fescue, Kentucky Blue Grass, Canada Blue Grass, Alfalfa, and Bromus Inermis.

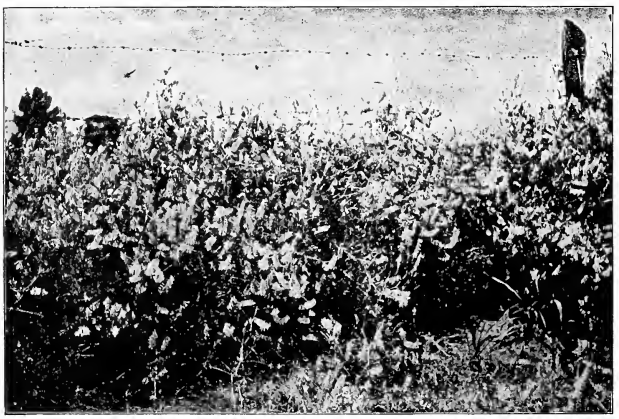
Moist Pasture Mixture: Timothy, White Clover, Alsike, Medium Red Clover, Mammoth Clover, Melilotus, Kentucky Blue Grass, English Rye Grass, Meadow Fescue, Sheep's Fescue, Tall Fescue, Red Top, Orchard Grass, Tall Meadow Oat Grass, and Bromus Inermis.

These mixtures should be seeded by hand, and it would be better to sow then either during April or May with a nurse crop, or else in July without one; in short, apply the same rules as to time of seeding that you would apply to Alfalfa. These mixtures must be sown on well-prepared soil and covered with a weeder or some such tool. Upon request we will furnish mixtures suitable for renovating old pastures and stumpy ground, although the same results cannot be expected on this soil that would be secured where a fairly good seed-bed can be prepared.

SOWING PASTURE MIXTURES—Of the pasture mixtures sow eighteen to twenty pounds per acre; of the meadow mixtures sow twenty-two to thirty pounds per acre.

VETCHES

WINTER VETCH, VICIA VILLOSA, HAIRY OR SAND VETCH—We have experimented with the Vetches and particularly Winter Vetch, Vicia Villosa, for ten years, and each year we learn to like it better. For two years we grew it on one hundred and seventy-five acres in connection with Soy Beans, with gratifying results; we have tested it out with different rates of seeding, different times, and in connection with different crops, and are more pleased with it the more work we do. Reference to our table of analysis, page 32, will show you the feeding value of the hay; reference to Tables 1, 2 and 3, pages 26 and 27, will, we think, be convincing as to its comparative usefulness as a protein producer, and as a soil restorer in adding nitrogen. We have used it very little for hay, somewhat for pasture, and a good deal to plow under. There is no question as to its value as a hay crop, especially where you are in need of this sort of catch crop. Grown with a grain crop to support it, it will make a reasonably good yield of hay, analyzing a little better than Alfalfa. However, it is as to its value as a nitrogen gatherer to plow under that we are at present best informed, and for this purpose no other plant that we have will quite do the same things. It is almost universally conceded to be the best cover crop which we have, and we believe that for the Corn Belt no other crop will succeed as well as it will for sowing in corn at the last cultivation, and plowing under the following spring. If it is used for this purpose, if possible the rotation should be so handled that the Vetch can be left until May 15th before plowing under; at this time your fields will be a mass of green stalks and leaves, about all that you can turn under with a plow, and you note by Table 2, page 27, that we estimate 94.9 pounds nitrogen to be gathered from the air by a good crop of this plant; this is sufficient to furnish all the nitrogen required for about a ninety-bushel corn crop, this nitrogen at present prices of commercial fertilizer being worth $20.88.



WINTER VETCH
Plants in Full Bloom. (Courtesy of the Practical Farmer.)

SEEDING—Winter Vetch may be handled in a good many different ways, and it has given dependable results in any way that we have ever tried it. It may be seeded in April with Canada peas and oats, when it will come on after the peas and oats, furnish summer pasture, or with oats or barley (in our test plots it came on satisfactorily after the grain crop was removed) and would furnish a reasonable amount of summer pasture, or it may be seeded, from our experimental knowledge, at any time during the summer without a nurse crop, when it would furnish good summer or fall pasture. We would say that in our opinion this method, while satisfactory enough, will not give quite as good returns for your money as the other methods which we will describe. Winter Vetch seems rather to make its best growth in cool weather and when not bothered too much with shade. If seeded in the spring with the crops already mentioned the hot weather comes on too soon to please it, and also the shade bothers it, so that with us it does not make its maximum growth. Furthermore, if seeded any time before July 1st, it is our experience that it will winter-kill the first winter, while if seeded later than that it goes through the winter all right. If seeded early in the spring or summer without a nurse crop of any kind, our experience is that it makes a better growth and furnished more pasture, probably giving better returns for your money than if it were seeded with a nurse crop. For the very best returns from the use of this plant we find that seeding with Soy Beans at time of sowing the Soys, or else in corn at the last cultivation, or on stubble ground or cultivated ground preferably during July (if necessary somewhat later than this), and either in connection with rye or

alone, will give excellent results, particularly so if the rotation is so adjusted that the plants do not need to be plowed under until about May 15th following. If sown with rye in the fall they will furnish an abundant amount of early spring pasture, coming on vigorously and lasting until late in June, when the plant seeds and dies.

Now, to compare results on these different methods. If seeded with Soy Beans the minimum amount of seed is required. We use only 20 lbs. Vetch, and 18 or 20 lbs. Beans, mixing thoroughly in the hopper. The two plants do not greatly interfere with each other. The Vetch grows slowly early in the season, and cultivation of the Soys does not greatly interfere with it. If the Soys are very thick, they will shade the Vetch a little too much for it to do its best. After cultivation of the Soys is over with, the Vetch will spread out and by fall will pretty well cover the ground; will thus furnish considerable fall pasture if desired, or, in our opinion, would make $8.00 or $9.00 worth of nitrogen to plow under. Seeded in this way, the probabilities are that the plants would winter-kill. Seeded in corn at the last cultivation, the plants will secure a good start before winter, will come on early the next spring, and on May 15th will, as already stated, with a good crop, furnish as much as 96 lbs. of nitrogen per acre, costing you not more than $5.00 and worth about $21.00. Equally satisfactory results would be obtained by sowing on stubble ground, after potatoes, etc., seeding preferably during July or August, and in our opinion not sowing later than September 15th throughout the Corn Belt. If desired for spring pasture or for hay in the spring, we advise July or August seeding, either with or without rye as preferred, but we would use rye in connection.

Sometimes corn blows down just before we are ready to sow Vetches at the last cultivation, and customers have asked us what to do under these conditions. This year we sowed in our trial grounds a patch of Vetch on top the ground without any covering whatever, doing this at about the time of ordinarily laying corn by. The result was a perfect stand of Vetch, which came up after the first showers and which did remarkably well all season. We believe our customers can adopt this method when necessary without greatly worrying about the outcome.

AMOUNT OF SEED PER ACRE—Sowing with Soy Beans, use 20 lbs. seed to the acre; sowing in any other way, about 40 lbs. to the acre; if sown in the fall with rye, use 40 lbs. Vetch, and 1 bushel of rye. The Vetch and rye, or Vetch and beans may be mixed together and sown with grain drill.

SEED BED—We have always used a well prepared seed bed, and would consider this a necessity. The seed should be covered about an inch, but do not cover deeper than this if you can help it.

INOCULATION—Our experience has been that Vetch is quite exacting about inoculation. Some customers say that they succeed without it, but we failed dismally until we got inoculation. It is possible that garden peas have the same inoculation that Vetches have; also swampy ground pretty much all over the country contains wild Vetch, which, of course, would have the same inoculation. Within another year or so, doubtless soil from Vetch fields will be for sale. We never sell soil from our own fields.

We can furnish Nitragin inoculation for the Vetch just as we do for any other legume and at the same prices. See price list.

HARVESTING—We have never made any Vetch hay, but our experience with the plant leads us to think that it would need to be handled practically the same as Alfalfa, that is, to be raked and shocked before the leaves got too dry, and cured out for four or five days in the shock before putting into the barn.

HARVESTING FOR SEED—This year we expect to harvest some Winter Vetch for seed, but an extremely hard freeze very late in the spring ruined this crop, the first time that this has happened with us in 10 years. However, each year we have talked with men who have harvested the crop for seed. There seems to be little difficulty about it. Our informers say that Winter Speltz, wheat or rye are all reasonably good for holding the Vetch off the ground so that it may be harvested; that Melilotus Alba is still better, and Timothy is also very highly recommended. The use of Timothy would be by sowing the Vetch on an old Timothy sod, disked up in the fall and seeded to Vetch. Melilotus should be used in the same way. The crop is harvested either with self-rake, binder or mowing machine, the self-rake being popular. There is said to be no trouble whatever about securing the crop. The seed can be separated from rye by use of special machines. Timothy or Melilotus would be very easily separated.

SEED—In Europe, Winter Vetch seed grows practically as a weed, volunteering in grain fields, and its crop being purely a side issue with the farmers. Its purity on this account is not always perfect, some seed containing wild Vetch of different sorts and some containing much Cockle. We buy the very purest seed obtainable and have never received a complaint concerning this seed. We also have, this season, a large amount of Winter Vetch growing on contract in America, and early in the summer of 1915 expect to have good-sized stocks of American-grown seed for our customers. Our growers claim that American-grown seed is superior to European, and it is in order to give our customers the very best of everything that we have contracted this seed. We pay a trifle above European prices for it and are therefore compelled to charge a little extra.

SPRING VETCH, VICIA SATIVA, COMMON, SMOOTH or OREGON VETCH—Our experience so far with this variety has been unsatisfactory, and yet our customers tell us that it succeeds with them first rate. Probably we do not know how to handle it right yet. It is said to make splendid feed when sown with Canada peas and oats, and to make a splendid amount of growth when it does right. Sow about 60 or 70 lbs. per acre with a bushel of oats, and 45 or 60 lbs. of Canada peas. Seeding should be done early in the spring, as early as it is practical to seed oats.

SOIL FERTILITY

No one needs to be told of the importance of soil fertility. Already the world is up close to the hungry stage. Notice how quickly the grain markets climb when hot winds are reported throughout the Corn Belt, and corn is known to be suffering, even moderately. If this is true today, how much more will it be true in fifty years with twice the population to support that we have now. The best farmers today are only a little reluctant to admit that most farms have simply been mined during the past fifty or seventy-five years, that they are not even as productive when fairly well cared for as they were ten years ago, that each year it becomes a little more uncertain and precarious trying to get a catch of clover, and that we now must begin to put back some of the elements that we have been mining from the soil all these years in order to even retain the present degree of fertility. A good many of the more progressive farmers go further, and say that they are going to handle their soil in such manner as to make it more fertile than it was the day the forest was removed, and the virgin sod broken. It is to this latter class that we commend the pages in this booklet, and it is this latter class that will be in line to make the most money when with increased population the farmers come into their rightful heritage.

We used to think that rotation of crops, especially if we grew some legumes, would maintain fertility, or even increase it; this theory is untenable. As Dr. Hopkins says, "You might as well rotate your pocketbook between different members of the family." The only reason that rotation accomplishes anything in particular is that it reduces the entire fertility, reduces each element of plant food more uniformly than does a repetition of the same crop. The result in the end would be a more complete soil depletion than by any other method you could use. The theory that growing a legume crop maintains or increases soil fertility, even if the entire tops were removed is equally untenable. Please notice by Table 1 just what we are doing to our soils with each crop that we grow. Notice that Medium Clover with the top removed leaves the soil $2.84 poorer than it found it; that any other legume excepting Alfalfa if the tops are cut and removed leaves the soil still worse off; in fact, that any legume crop if the tops are removed may be as hard on the ground as a grain crop. Table 1 is given to cover nitrogen and phosphorus only, simply because we do not know quite as much about potash as we do about these other elements; the potash draft should be figured in these computations.

Now you will notice from Table 1 that we are mining the soils tolerably fast, and especially in nitrogen, the only exception to this being Alfalfa, which actually adds an appreciable amount of nitrogen each year. In order to maintain the present fertility, we must either return these elements in the form of manure or of commercial fertilizers or of plant residues plowed under. In this chapter we will discuss mostly the returns from manure and from plant residues plowed under, the use of chemical fertilizers being handled in the succeeding chapter. Most of us maintain our soil fertility in part through the use of manures. It is entirely possible to retain all of the nitrogen the plants require, and part of the phosphorus, but to do this requires, first, very careful handling of the manure in order that no nitrogen shall escape through heating and fermentation or through leaching, the only way to prevent this being by the use of concreted covered barnyards and manure pits to prevent the leaching, and by not allowing the manure to stand long enough in a heap to heat and lose nitrogen in this manner. The proper phosphorus content cannot be maintained by the use of manure, because phosphorus goes largely into the bone of growing or fattening animals which we ship to market. You will note by Table 1 that the phosphorus draft does not run into money very fast; it is entirely practical to buy it without a heavy expense. Most farmers do not have enough manure to anywhere near return their nitrogen draft, and it is for their consideration that we offer Table 2. Note in this table that a good crop of Melilotus Alba when all returned to the soil should, by these computations, furnish 138.5 pounds nitrogen, enough to take care of more than a one hundred and twenty-five bushel corn crop without drawing any nitrogen at all from the soil; that $1.00 spent in Soy Beans and the entire crop plowed under will in one season gather about 83 pounds nitrogen, enough for about an eighty-bushel corn crop, and returning to the investor $17.34 net for his $1.00 investment. That Winter Vetch, Vicia Villosa, sown in corn at the last cultivation, plowed under May 15th following this, will gather about 97 pounds nitrogen, more than enough to take care of a ninety-bushel corn crop without touching the present store of soil nitrogen. These figures are by no means guess work; we actually know what each one of these plants does. The only guess work about it is the estimated yield per acre, which, of course, would vary with different seasons and different treatment. Our yields are estimated for soils that are already a little above the average in fertility. Before publishing them, we submitted them to the Ohio Experiment Station for criticism, and they agreed with us that they were in proper proportion to each other, that the yields were not higher than could be reasonably expected when given fairly good conditions, and that our method of computation was entirely right. Why not try some of these great legume crops to plow under on every farm where the fertility is not already being increased through the use of manure? Nitrogen is the highest priced fertilizer we have, and procured through the form of legumes plowed under it will cost you from one-fourth to one seventeenth what it will in the form of commercial fertilizers. The cost of these legume crops is not excessive, and with the possible exception of Vicia Sativa, all of these crops are past the experimental stage.

TABLE 1—Draft on Soil of Various Plants When the Tops Are Harvested and Entirely Removed.

CROP	Estimated Yield Per A.	Root &c.	Nitrogen Soil Draft	Phosphoric Acid Soil Draft	Value Nitrogen Draft	Value Phosphoric Acid Draft	Value Total Draft
Alfalfa inoculated, cut for hay	7500	42	*26.2	45.7	*$5.76	$4.57	*$1.19
Melilotus Alba inoculated, cut for hay	7500	20	34.6	42.0	7.61	4.20	11.81
Medium Clover inoculated, cut for hay	4500	32	1.7	24.7	.37	2.47	2.84
Alsike inoculated, cut for hay	4200	20	14.3	21.0	3.14	2.10	5.15
Soy Beans inoculated, cut for hay	5250	10	31.9	....	7.01	....	7.01
Soy Beans inoculated, cut for grain	1200	10	25.8	....	5.67	....	5.67
Soy Beans not inoculated, cut for hay	5250	....	124.9	....	26.48	....	26.48
Soy Beans not inoculated, cut for grain	1200	....	99.3	....	21.85	....	21.85
Winter Vetch inoculated, cut for hay	5250	11	35.8	52.9	7.88	5.29	13.17
Spring Vetch inoculated, cut for hay	4500	11	30.7	43.5	6.75	4.35	11.10
Cow Peas inoculated, cut for hay	5250	6	21.8	27.3	4.80	2.73	7.53
Timothy, cut for hay	4500	....	42.3	22.5	9.31	2.25	11.56
Corn, cut for grain	65 bu.	....	72.2	33.4	15.88	3.34	19.22
Wheat, cut for grain	30 bu.	....	44.2	14.3	9.72	1.43	11.15
Oats, cut for grain	38 bu.	....	33.4	15.3	9.35	1.53	8.88
Barley, cut for grain	26 bu.	....	37.8	15.7	8.32	1.57	9.89

*Indicates gain.

In compiling this table we have taken as yield the probable amounts secured on soil a little above the average fertility for the state. Note that a leguminous plant with the tops entirely removed is frequently as hard on the soil as a non-leguminous one, and note with Soy Beans when not inoculated that a leguminous plant may be much harder on the soil than a non-legume.

The moral is evident: Always inoculate unless certain that your plants will get their own. Finally, note that Alfalfa is the only crop we have in this table which constantly adds fertility to the soil even when the entire top is removed; a brilliant example of "Having your cake and eating it."

TABLE 2—Effect on Soil of Various Leguminous Crops When Entire Tops Are Returned to It.

NAME OF SEED	Estimated Yield Per Acre	Lbs. Nitrogen gathered from Air per Acre	Value Nitrogen Gathered from Air	Usual Cost Seed Per Acre	Gain Per Acre Over Cost	Gain % Per Acre
Melilotus Alba (White Sweet Clover)	7500	138.5	$30.45	$4.00	$26.45	661
Soy Beans	5250	83.4	18.34	1.00	17.34	1734
Melilotus Officinalis (Yellow)	5250	96.9	21.31	4.00	17.31	432¾
Vicia Villosa (Winter Vetch)	5250	94.9	20.88	5.00	15.88	317⅞
Vicia Sativa (Spring Vetch)	4500	81.4	17.91	2.75	15.16	551¾
Crimson Clover	4500	72.4	15.93	1.60	14.33	895⅝
Mammoth Clover	6000	68.4	15.05	2.50	12.55	502
Medium Clover	4500	59.8	13.17	2.50	10.67	426¾
Melilotus Indica (Annual)	3000	55.5	12.21	2.00	10.21	510½
Cow Peas	5250	49.8	10.95	4.00	6.95	173¾

This table is meant to complete Table 1, using the same plants and the same soil, returning the entire top Some farmers say they cannot afford to pay, for instance, $5.00 per acre for Winter Vetch seed to plow under. If you had money to invest, and someone offered you 300 percent. annual interest, would you refuse? Please note the relative position of Cow Peas in this table. At present more Cow Peas are grown to plow under than any other crop we know of. Would it not be wise, by these figures, to change to one of these other crops?

TABLE 3—Protein Production of Various Leguminous Plants.

NAME OF PLANT	Estimated Yield Acre	Protein
Melilotus Alba	7500	1297.5
Alfalfa	7500	1095.0
Melilotus Officinalis	5250	908.2
Winter Vetch	5250	892.5
Soy Beans	5250	782.2
Spring Vetch	4500	765.0
Cow Peas	5250	745.5
Oats and Peas	6000	618.0
Medium Clover	4500	558.0
Alsike Clover	4200	537.0
Timothy	4500	270.0

This table is intended to still further complete Table 1, showing the relative importance of our ordinary legumes and Timothy in the production of protein per acre. We would criticise this ourselves by saying that we do not believe Melilotus Alba is a more valuable plant than Alfalfa.

The modern theory of soil fertility is a beautiful thing. See how thoroughly it corresponds with every principle known to be wise or necessary in good farming. First, the use of limestone rock. This has a three-fold effect; it sweetens the soil, thereby allowing legumes to thrive; it has a mechanical effect, making the soil looser and more easily handled; and third, it has a chemical effect, liberating insoluble phosphorus and potash. Then, the action of manure. This is now known to make conditions for plant bacteria much more satisfactory; second, it greatly assists in retaining soil moisture; third, it has a decidedly beneficial effect on the mechanical condition of soil, and fourth, in its decay it considerably assists in liberating insoluble phosphorus and potash. The same thing may be said of green manure or plants plowed under. Finally, does anybody believe that we could afford to buy all the nitrogen required in growing our crops, when you consider that for growing a bushel of corn it would require 20 cents a year expended for nitrogen, about 40 cents for a bushel of wheat and other crops in proportion, but because we can obtain this nitrogen free from the air through the use of legumes, it is unnecessary to buy it. Considering all these facts, it is hardly possible to overestimate the value of lime, of manure, and of our great legume crops.

FERTILIZERS

As already stated, it is generally agreed now that most farmers have for many years been practically mining the soil, and even the most fertile soil will not stand this indefinitely. Average soils throughout the Corn Belt today contain plant food in possibly the following quantities: Nitrogen, 3000 lbs.; Phosphoric Acid, 2000 lbs.; Potassium, 30,000 lbs. Table 1 shows the number of pounds of nitrogen and phosphoric acid drawn from the soil through our ordinary crops. Your soil may be better supplied with plant food than the average, or it may not be so well supplied. If it is about the average you will note that there is about enough nitrogen for forty corn crops, provided you can get every particle of fertility out of the soil, which you cannot do. To purchase nitrogen costs today 20 to 25 cents per pound. Thus corn fed on commercial nitrogen would cost for this fertilizer alone at least 25 cents per bushel. Nitrogen is the most expensive fertilizer we have if purchased commercially; the

least expensive if secured through Nature's method of inoculated legumes, which are returned to the soil. There is about enough phosphoric acid in most soils to last fifty years with ordinary crops. It is fortunate that phosphoric acid is at present inexpensive, because even if all barnyard manure is carefully saved and returned to the soil, we will still be removing some phosphoric acid, on account of the fact that it is largely used in the bone of growing animals which we are constantly shipping to market. As a matter of fact, one of the things that soil experts most thoroughly agree upon is that most soils, in fact nearly all of them east of the Missouri River are now deficient in phosphoric acid, and that applications of it in some form will pay about ninety-nine times out of a hundred; this applies to every crop that we grow. Potash is liberally present in all soils, but very frequently is in insoluble form. Plowing under any form of plant residue, manure, or growing plants themselves, help to liberate both potash and phosphoric acid in the soil. The Ohio Experiment Station seems to have conclusively demonstrated that moderate applications of available potash, say forty pounds per acre every two or three years actually pays a profit of $2.00 or $3.00 to the acre annually. This is doubtless because the great stores of potash in the soil are somewhat insoluble. Acid phosphate is very widely used, and gives good results, but has two objections. Legumes require alkaline soils, and the application of an acid at the time of sowing a legume is the wrong principle; also, scientists tell us that a good deal of the phosphoric acid in acid phosphate reverts or unites with the lime in the soil, becoming quite slowly available. Bone Meal is largely used as a carrier of phosphorus, and there are practically no objections to it. Basic slag is, to our minds, the ideal carrier of phosphorus for legume crops, because it contains 35 to 50 percent. lime, which no other carrier does. It thus helps to create an alkaline condition, it is as quickly soluble as any other carrier, and it does not revert. Also it seems to us that its effect shows distinctly in the soil for a much longer period than does acid phosphate. We have used basic slag where it could be plainly seen for ten years where the material was applied, while farmers complain that the results of acid phosphate are usually noticeable for only one year. Almost certainly this is on account of its phosphorus having reverted.

There are four principal forms of phosphorus on the market today. The cheapest one is known as raw rock phosphate. This is simply the phosphate rock finely ground and untreated in any way. A pound of phosphorus of this nature costs only about one-fourth as much as a pound of phosphorus in acid phosphate, but the profitable use of the raw rock phosphate absolutely requires either that it be used in connection with liberal quantities of barnyard manure, or plowed under with a green manure crop. In either of these cases, the decaying vegetable matter attacks the rock, making its phosphorus available. If applied to the surface of the ground, or where it does not come into contact with decaying vegetable matter, raw rock phosphate will do almost no good whatever.

WHERE TO OBTAIN PHOSPHORUS—We have established connections with one of the largest and best manufacturers of raw rock phosphate, and can supply this to our customers, when desired, at moderate prices. Guaranteed analysis 14 percent. phosphorus, fineness guaranteed to equal that of any other manufacturers in the United States. We advise shipping this in paper-lined cars in bulk, and not sacked. A minimum carload contains 22.4 tons.

When obtainable, we consider Basic Slag used as a quickly available material suitable for top-dressing meadows, etc., or where good-sized amounts of manure are not available, to be the best carrier of phosphorus which we know today. Our business in this material has grown to large proportions and our customers are enthusiastic. This product, however, comes from Germany, and as these pages are being written, the disturbed foreign situation makes it out of the question to handle it at all, and we have, therefore, for the present, withdrawn all quotations. Doubtless, as soon as the war ends, we will reestablish relations with the German producers and will again quote our customers on this valuable fertilizer. In the meantime, we advise substituting Bone Meal, where a quickly available fertilizer is desired. While the Bone Meal does not carry appreciable quantities of lime, in other respects it is similar to Basic Slag. We can furnish the Bone Meal for shipment either from Mechanicsburg, Cleveland or Chicago. We can also supply Blood Meal, Ready Mixed Fertilizers or AcidPhosphate. Prices upon application.

WING'S SELECTED GRAINS

BARLEY

CHAMPION BEARDLESS—We are pioneers in growing beardless barley in Ohio. Somewhere we read that it was a valuable nurse crop for meadows, and also that it was invaluable feed for farm animals. We began growing it nearly fifteen years ago, and were so well pleased with it from the beginning that we have used it almost exclusively for a nurse crop on our farm ever since our first experiment. It has short, very stiff straw and little foliage, and ripens only a little later than wheat, coming off the ground before the young meadow has begun to suffer at all. If sown as recommended it forms so little shade as to injure meadows none whatever, and as it does not stool as much as oats and very rarely lodges, it practically never smothers the young meadow under it. If cut when in milk it makes a large amount of very valuable hay greedily eaten by all kinds of stock. If cut for grain the straw may be fed with safety owing to its being beardless, and the grain is very rich, good feed. We had splendid results from it when fed to sheep. If fed to hogs it must be either soaked or ground, and should be mixed with oil meal, tankage or other feed to form a balanced ration. Sheep like it so well that it must be fed with caution until they are accustomed to it, but after this time is reached it may be fed liberally, and will give as good results as any grain with which we are familiar. Our Champion variety is the heaviest yielding variety known, and at the same time forms a very excellent nurse crop.

At present we believe there is no absolutely pure, Beardless Barley on the market. Bearded Barley has always been in the Beardless since we begun growing the crop fifteen years ago. Furthermore, Bearded Barley seems to increase faster than Beardless, and stocks that are not hand-picked gradually become worse. Our own supply this season contains considerably more beards than usual. These will probably run between 5 and 20%, and yet when we have bought outside Barley, not grown from our own stocks, the percentage has always run from 30 to 60% beards, so that we still consider our present stocks as pure as any that are on market.

For several years we have been breeding up a quantity of barley that would run 99% pure. We would have harvested 700 bushels of this crop this season, but the drouth nearly killed it and we have instead, 100. In 1916 we will be able to place this pure barley on market. None is for sale now.

We have also been breeding up from one single head a strain of Beardless Barley that we think will greatly outyield the ordinary. The drouth nearly killed it also, and our stock of seed did not materially increase.

Used for nurse crop, Beardless Barley should be sown at the rate of 3 to 5 pecks per acre, and for grain at rate of 2 bushels per acre, seeded at oat-seeding time.

COMPARISON BETWEEN BEARDED AND BEARDLESS BARLEY—Beardless Barley is chiefly valuable as a nurse crop; for grain it is uncertain. It usually yields from 12 to 30 bushels per acre, sometimes 40 to 50 bushels. Bearded Barley should yield more uniformly and at a rate of from 30 to 50 bushels per acre. South of the Ohio River, Bearded Barley may be sown in the fall; but north of this we can recommend nothing but spring sowing.

WISCONSIN PEDIGREED BARLEY—This variety has been a sensation in the Northwest, sometimes outyielding all other varieties many bushels per acre. Our stocks come from reliable sources in the Northwest, and we believe will please all who try them.

WINTER RYE—A valuable crop for soiling, green fodder, straw or grain. It is largely used by farmers to seed in the fall, and pasture early in the spring. Our stock is Northern grown, and will unquestionably give good results wherever sown.

Winter Rye is also a very good nurse crop for Alfalfa or Clover. It should be sown in the spring at oat-seeding time, about one-half bushel per acre. It will grow 6 to 12 inches tall and die. It takes the place of the weeds early in the spring, dies before the young meadow has been overshaded, and forms a mulch throughout the rest of the summer. We can recommend this plant as a nurse crop, but we do not like it so well as Beardless Barley. Do not use spring rye for this purpose, as it will form grain, and be no better probably than oats.

BUCKWHEAT—Our stocks are the best which we can obtain on the market. We handle on a small commission and our prices will be found to be on the market at all times.

SORGHUM—Grown both for syrup and for forage. Three to five pounds per acre is recommended for syrup. When fodder is desired, 10 to 15 pounds is the right amount of seed. When desired for hay, not less than 75 pounds of seed should be sown per acre. It then makes very large amounts of hay, the feeding value of which is about that of corn stover. It is dangerous to pasture sorghum, but it is said to be perfectly safe when cured into hay.

SEED OATS

We give below the eight-year average yield of 21 varieties of oats as tested by the Ohio Experiment Station. Note that 3 of the highest yields are those of the Siberian, Sixty Day and Improved American.

We do not handle the 21 varieties ourselves, but have only the Siberian, Sixty Day and Improved American, and only moderate stocks of these.

The Improved American Oat has given our customers satisfaction over a little wider territory than most any other variety which we have ever sold. We can recommend this oat as a splendid general purpose variety, adapting itself to various soils and conditions. It is a strong grower, rather tall, very vigorous and sturdy, and a very heavy yielder.

One hundred and seventy-five acres of our Improved American Oats on just moderately rich ground last year averaged about 50 bushels, while adjoining fields of other varieties made only 30 to 40. Ten acres of very poor soil made 50 bushels, while adjoining fields of much better soil and other varieties made less. We believe that where stiffness of straw, hardiness and large yield are desired, it is very difficult to better this oat in Ohio.

The Siberian continues to hold a very high record for this state. It has not given quite as good satisfaction in adjoining states as it has in Ohio. This oat is very hardy, and a very heavy yielder both of grain and straw. Our stocks made 40 to 50 bushels on soil of just average fertility. The straw is not quite as stiff as the Improved American. In the test plot, side by side last year, there was only four pounds between the Siberian and Improved American.

The Sixty Day Oat is certainly a very valuable variety. It is giving satisfaction over a wide range of territory, is yielding right along side of any variety, is at least a week earlier, gets ahead of the rust and hot winds, and when oats must be used as a nurse crop is proving decidedly the best variety for this purpose, as it grows 6 inches to a foot shorter than ordinary varieties. It frequently happens that farmers can get this oat on the market 10 days earlier than any other variety and get several cents per bushel higher price on this account.

We are now testing out on our Experiment Grounds many varieties of oats, selecting from the highest yielding varieties in Ohio, Michigan and adjoining states, and from the greatest oat breeders in the world. Some of these experimental varieties promise very well; one of them yielded 75 bushels; but we will not feel warranted in putting them on the market until we have given them one or two more years of trial.

Ohio Agricultural Experiment Station Experiments with Oats at Wooster, O.
Ten-Year Average Yield of Twenty-One Varieties of Oats, 1904-1913.

VARIETY	Side or Branching	Color of Grain	Bushels Per Acre
Alaska	Branching	White	60.63
American Banner	Branching	White	65.22
Big Four	Branching	White	67.63
Clydesdale	Branching	White	59.27
Czar of Russia	Branching	White	65.52
Early Champion	Branching	White	59.80
Golden Fleece	Branching	White	60.46
Green Mountain	Branching	White	64.97
Improved American	Branching	White	66.89
Joanette	Branching	Black	64.61
Lincoln	Branching	White	65.01
Long's White Tartar	Side	White	62.28
Morgan Feller	Branching	White	63.62
Seizure	Side	Yellow	58.95
Siberian	Branching	W. & Y.	68.23
Silver Mine	Branching	White	67.08
Sixty Day	Branching	Yellow	65.41
Swedish Select	Branching	White	59.29
Twentieth Century	Branching	White	61.14
Welcome	Branching	White	60.54
Wideawake	Branching	White	58.16

SEED WHEAT

We give below the results of the Ohio Experiment Station's long time test with 24 varieties of seed wheat. We do not handle all 24 varieties, but only Gypsy and Poole. For some years we have been especially recommending the Gypsy, and this test certainly should be convincing proof of the splendid yielding qualities of this variety. Our stocks of Gypsy are descended from wheat secured from the Experiment Station itself.

Last year we sold large amounts of Gypsy Wheat, and the reports received from our customers are so enthusiastic over this breed that we feel safe in recommending it to our customers as the very best bearded variety grown in the state, enough better than the others so that in future we expect to handle this one variety alone. Gypsy Wheat goes through the winter almost like rye, seeming to fairly rejoice in the cold, coming out in the spring in the very best heart possible. It has a large amount of straw, but of such splendid quality, so little given to lodging, that we can cheerfully recommend it for fertile soils, on which almost any other variety of wheat would lodge. Our own neighborhood contains as fertile soil as is in the state, and we grow this wheat with entire success on the best land which we have. The field from which we obtained our stocks in 1910 produced at the rate of 27 bushels per acre of Gypsy Wheat, while another variety which is usually thought well of in this section, the Goenz wheat, grown alongside of it under identical conditions, made less than 20. In 1911, one field of Gypsy Wheat grown by a neighbor from our seed, yielded 40 bushels per acre. In 1914 one of our own fields of Gypsy Wheat made 42 bushels of 62 pound wheat per acre.

POOLE WHEAT—We are sure that Poole Wheat is the best all-around, smooth wheat grown in the state, and we are this year growing a field for seed purposes. Poole Wheat has been giving good satisfaction for many years, and our customers will hardly need an introduction to it. Our stocks are descended from Experiment Station Seed, and we are sure they will give the best of satisfaction.

Ohio Agricultural Experiment Station Results of Experiments with Wheat at Wooster
Seventeen-Year Average Yield of Twenty-Four Varieties. 1898-1914.

VARIETY	Bearded or Bald	Color		Bushels per Acre
		Grain	Chaff	
American Bronze	Bald	Red	White	27.94
Buda Pesth	Bearded	Red	White	29.76
Dawson's Golden Chaff	Bald	White	Red	31.89
Deitz	Bearded	Red	White	29.90
Early Red Clawson	Bald	Red	Red	29.29
Early Ripe	Bald	Red	Red	29.94
Fulcaster	Bearded	Red	White	29.41
Fultz	Bald	Red	White	28.95
Fultzo-Mediterranean	Bald	Red	White	28.68
Gold Coin	Bald	White	Red	30.35
Gypsy	Bearded	Red	White	31.15
Harvest King	Bald	Red	Red	30.65
Hickman	Bald	Red	White	29.61
Mealy	Bald	Red	White	30.70
Mediterranean	Bearded	Red	Red	29.72
Nigger	Bearded	Red	White	31.26
Nixon	Bald	Red	White	29.62
Perfection	Bald	Red	Red	31.20
Poole	Bald	Red	Red	31.07
Red Wonder	Bearded	Red	White	28.60
Rudy	Bearded	Red	White	28.65
Turkey Red	Bearded	Red	White	24.64
Valley	Bearded	Red	White	30.96
Velvet Chaff	Bearded	Red	Red	26.84

CANADA FIELD PEAS

This plant should rightfully assume greater importance than it has at present. Many of our best farmers know and understand this, but very many do not. It is used both as green feed and as fertilizer; and in both places it deserves to occupy a very prominent position. As green feed sown with oats or barley early in the spring, it fills a place which no other plant we have can occupy. The amount of feed produced on an acre is very large. It comes before any other good nutritious feed suitable for hay or soiling. It is greedily eaten by practically all kinds of stock, and is as nourishing as can be desired. As a fertilizer, either when plowed under or pastured off, it will rank very high. Some of our very best farmers sow each year a field which they wish to enrich to Canada peas and oats, hogging off the crop or depasturing with cattle or sheep, and they say that they can tell the line right to the foot where these peas grew, when they plow the field up and put in another crop. We would earnestly urge our customers to use these peas more liberally than many of them have been doing in the past, knowing that they will be very well pleased with the result.

Canada peas are cold weather plants, and the earlier they are seeded, the better they will do. Many of our customers seed in March, most of them, however, the first of April. If the season is cold, they may be sown later than this, but always get them in as early as possible.

The very best results would probably be obtained by seeding the oats and peas as deep as you would dare to without causing the oats to rot. Sow a bushel of Canada peas and a bushel of oats per acre. If it is desired to sow rape with them, sow 5 pounds of rape. If you wish to sow Winter Vetch with them, use 40 pounds of it; if Spring Vetch, sow 60 pounds. All these combinations will give good results.

An excellent way of seeding Canada peas, both according to our customers and to our trial grounds, is to plow them under, not plowing more than 4 inches deep, doing this early in the spring, then fitting the ground and sowing the oats, or whatever else goes with them, in the usual manner. This method is giving us excellent results.

COW PEAS

These have a dual purpose, and wherever they are needed they are indispensable to the successful farming of the country. They will grown on soil so poor or impoverished that it is nearly impossible to grow any other farm crop. If one or two crops of them are grown and turned under for fertilizer, this same soil will then produce fair crops of every sort. In the South they are very extensively grown also for hay, being called the "Clover" of the South. They are legumes, and gather nitrogen from the air to add to the soil. We strongly recommend growing a crop of these preparatory to attempting Alfalfa, even on moderately fertile land.

They are about the same value as Soy Beans when cut for hay, but they are more recumbent in nature, and therefore more difficult to cultivate and harvest than Soy Beans. As a fertilizer crop we consider the Soys more valuable. Please note Table 2, page 00. They are either sown in drills and cultivated just like Soys, or very frequently are sown broadcast in corn at the last cultivation, this being an excellent way of handling this crop. The plants are rather difficult to cure for hay, in this respect being about the same as Soy Beans. For early sowing, immediately after corn planting is the proper time; if drilled, using 2 or 3 pecks of seed per acre: if broadcast, about 2 bushels.

TRUE DWARF ESSEX RAPE

This is a plant which is coming into such prominence that description or recommendation is really unnecessary. It is of the cabbage family, and in feeding the same results may be expected as would be from feeding cabbage, but at a fraction of the cost of growing. Nearly all shepherds who exhibit at fairs expect to make a large part of their gains from this plant. It produces an enormous amount of forage per acre, which may be fed with absolute safety to sheep, hogs or cattle. At the Michigan Experiment Station 128 lambs pastured on 15 acres of rape showed a total gain of 2,890 pounds during 8 weeks, which is 3 pounds per lamb per week. Our seed is the True Dwarf Essex, and not the worthless annual. Sow 4 pounds per acre broadcast, or 2 to 3 pounds if in drills.

This plant may be seeded any time between about April 15th and August 15th, with good results. Most growers sow several fields in succession, and turn stock from one to the other alternately. It will produce excellent pasture in about 45 to 60 days' time. It is not recommended to pasture late in the fall, after it has been killed by frost. We have had sheep actually poisoned on the frozen rape. A reasonably good seed bed is desirable, and the seed should be covered ½-inch. Sow 3 or 4 pounds seed per acre.

MILLETS

JAPANESE MILLET—A tall growing and enormous yielding variety. It is sometimes 6 to 8 feet high. Does not lodge and sometimes yields from 10 to 12 tons of green fodder per acre. When properly cured it makes excellent hay. It is recommended that this variety be sown on good rich soil, and only in the Northern States, as it does not thrive south of the Ohio River. If sown early in May and cut when in bloom it will produce a fair second cutting. May be sown from the middle of May to the first of July. Broadcast, 15 pounds per acre, but it is better to sow in drills, 12 to 14 inches apart, using 10 to 12 pounds per acre, and hoeing between the rows to keep down the weeds until the plant is a foot high or over, after which time it will smother all weeds out itself.

HUNGARIAN MILLET—It is the quickest maturing of any variety of millet. May be sown any time during the summer up to the middle of August, thus being very valuable to substitute where another crop has failed. Sow about 48 pounds per acre.

GERMAN OR GOLDEN MILLET—Tennessee Grown—This stock is much preferred to the same seed Western grown. Will grow in any climate or soil, and make a large yield of nutritious feed. Should be sown at the rate of 50 pounds or over per acre, any time between May 1st and June 15th; cover lightly. Cut in bloom before the seed hardens.

Hungarian millet is the quickest maturing, German next, and Japanese last. Hungarian has the finest stalks, German next, Japanese the coarsest. Probably the German and Jap would yield a little more forage than the Hungarian, but not of quite such good quality.

ANALYSIS OF AMERICAN FEEDING STUFFS

FRESH OR AIR DRY SUBSTANCE.

	Water %	Protein %	Fat %	Carbo-Hydrates %	Fiber %	Ash %
HAY and DRY, COARSE FODDER						
Legumes						
Alfalfa, 1	8.4	14.3	2.2	42.7	25.0	7.4
Clover, medium, 1	20.8	12.4	4.5	33.8	21.9	6.6
Soy Beans, average, 1	11.3	15.4	5.2	38.6	22.3	7.2
Soy Bean Straw, 2	10.1	4.6	1.7	37.4	40.4	5.8
Cow Pea, 1	10.7	16.6	2.9	42.2	20.1	7.5
Vetches, 1	11.3	17.0	2.3	36.1	25.4	7.9
Grains and Seeds						
Beans, Soy, 4	7.7	35.4	20.3	26.1	4.6	5.7
Cow Peas, 1	11.9	23.5	1.7	55.7	3.8	3.4
Corn, 1	10.9	10.5	5.4	69.6	2.1	1.5
Oats, 1	11.0	11.8	5.0	59.7	9.5	3.0
Waste Products						
Wheat Bran, 1	11.9	15.4	4.0	53.9	9.0	5.8
Linseed Oil Meal, old process, 1	9.2	32.9	7.9	35.4	8.9	5.7
Cottonseed Meal, 1	8.2	42.3	13.1	23.6	5.6	7.2

1—U. S. Department of Agriculture, Farmers' Bulletin 22.
2—Feeds and Feeding—Henry.
4—U. S. Department of Agriculture, Farmers' Buletin 372.

SPECIAL ADVICE—Our Mr. Joseph E. Wing has spent the greater part of his life in traveling, studying soils and plants under almost all conditions, not only in every state in the Union, but in foreign countries as well. He is familiar with the work that has been done at nearly all the Experiment Stations as well as that which has been done at Washington, and he certainly has had every opportunity to learn the whole agriculture scheme. Most of the year his time is fully occupied, but sometimes it is possible for him to make special trips to study conditions, give advice as to soil requirements, or suggest plantings of meadows and pastures. When his time permits, he is willing to do this for a reasonable compensation. As he has many requests for his time, such visits can seldom be arranged without previous correspondence and due notice.

PRICE LIST OF BOOKS

We are agents for books and circulars on Alfalfa and Soil.

ALFALFA IN AMERICA—By Joseph E. Wing, 480 pages, cloth. Price $2.00 postpaid. The most comprehensive, practical and valuable work on Alfalfa ever written. The writer has had much experience with the plant, growing it on his own farm and observing it in every state in which it can be grown. The book treats of the history, varieties and habits of Alfalfa, describes the conditions required by the plant and how to produce them where they do not exist naturally, tells how to prepare the soil, how to sow, care for and harvest the plant, the proper tools to use, how to erect suitable buildings for storing the hay. It describes the enemies of Alfalfa and how to combat them and discusses the soil in its relation to Alfalfa, its different constituents, and what fertilizers to use.

MEADOWS AND PASTURES—By Joseph E. Wing, 418 pages, cloth. Price, $1.50 postpaid. Describes the best methods of making and maintaining meadows and pastures. Contains full descriptions and illustrations of all the agricultural grasses, with directions for planting and caring for them when established. Profusely illustrated and beautifully printed.

IN FOREIGN FIELDS—By Joseph E. Wing, 549 pages, cloth. Price, $1.50 postpaid. In 1911 Mr. Wing was sent over a large amount of South American territory to collect wool statistics for the Tariff Board. "In Foreign Fields" gives in entertaining form the varied experiences which he had while on this trip, and also useful comment upon farm conditions as compared with our own.

FEEDS AND FEEDING—By W. A. Henry, 613 pages, cloth. New edition just out. Price $2.25 postpaid. This book is a cyclopedia of animal nutrition and rational feeding of farm animals. It shows how plants grow and elaborate food for animals, the functions of different nutrients, the production of flesh, fat and energy, how to calculate rations for farm animals. It gives the food values of the different feeding stuffs, the grains and grasses, mill and factory by-products. It sets forth the results of the tests of American and European Experiment Stations in feeding farm animals. In this connection a great many tables are given, showing the amount of food consumed in one day by the animals in the test, the product of the day's food in work, flesh, energy, etc. It is cross-indexed in such a manner that any fact stated in the text may be readily found. This book should be in the library of every up-to-date farmer.

ALFALFA—By F. D. Coburn, 400 pages, cloth. Price $2.00 postpaid. This is a standard work on Alfalfa growing by a well known authority; a very valuable book. It covers the ground thoroughly, discussing at length the plant, its culture and uses.

ALFALFA—By F. D. Coburn, 160 pages, cloth. Price 50 cents postpaid. This book covers the same ground as the larger one by the same author, but in a condensed form.

SOIL FERTILITY AND PERMANENT AGRICULTURE—By C. G. Hopkins, 653 pages, cloth. Price $2.70 postpaid. If there is anything you want to know about feeding, consult "Feeds and Feeding" above. If there is anything you want to know about soils, consult this book. It is the most scientific and complete and at the same time easily understood book on soil fertility that we have ever seen. It tells what soils are composed of, what food plants require, the effect upon soils of different fertilizers, different plants, and different rotations, and clearly explains why these things are so. It gives very complete tables bearing upon all important points in connection with soil fertility, these tables drawn from the oldest experiments in the world as well as all recent experiments, and is so tabulated and compiled that a busy man can ascertain anything he wants to know in the minimum amount of time.

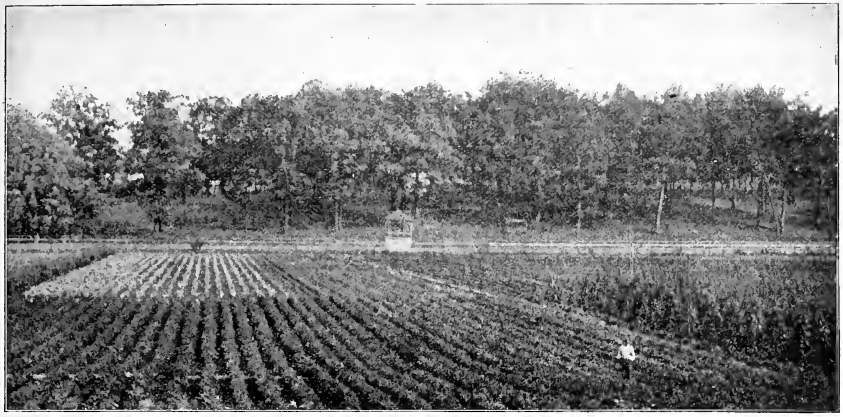
THE STORY OF THE SOIL—By C. G. Hopkins, 350 pages, cloth. Price $1.62 postpaid. Dr. Hopkins, in giving us this book, has done inestimable good to permanent agriculture. This book gives simply, clearly, and with remarkable logic, fundamental principles, and theories which must be understood and applied to every soil in the country. It covers the entire ground, giving full scientific reasons for every deduction, but giving them in such a clear and easily comprehended form, that anyone can understand it. We advise every farmer who has the least intention of maintaining his soil's fertility to buy this book and read it. It is in narrative form, and the story itself would carry one along with it, even without the remarkable teachings contained in it.

THE BOOK OF VETCH—By Wm. C. Smith, 157 pages, cloth. Price $1.25 postpaid. All we need to say about this book is, that taken in connection with our own modest article in this catalogue, it contains practically all that is known about the vetches today. The writer has had large experience with this plant, and values it as highly as we do ourselves

We would also recommend to every one who is interested in growing Alfalfa to write to the Ohio Agricultural Station at Wooster, Ohio, for their Bulletin No. 181, on Alfalfa.

The Kansas Experiment Station at Manhattan, Kansas, has a very valuable bulletin on Alfalfa. Write them for Bulletin 155.

INDEX OF FIELD SEEDS



SMALL PORTION OF OUR TRIAL GROUNDS.

GARDEN SEED DEPARTMENT

IN THE following pages we try to give honestly and fairly just the differences between each variety of vegetable. We have found ourselves that, in many cases, seedsmen's descriptions were flattering and did not give essential details that would show relative merits between different varieties. We try to give relative merits in each case. Each of our vegetable seeds is tested out in our trial grounds, side by side, under identical conditions. In this way we make nearly one thousand tests a year. We thus know just how pure and good our own stocks are. Also, besides our own stocks, we test large numbers of other seed growers' and dealers' lots and select the choicest from whatever source it originated. Our breeding work, improving strains in all lines, goes forward systematically and carefully.

In 1916 we expect to put out a new tomato which we have spent years in breeding up. It ripens exactly with Earliana, yields 30 per cent heavier, with a 30 per cent gain in smooth tomatoes, and cuts very much better than Earliana. We have no seed of this to offer this season.

It is probable that no season on record has been more trying and perplexing to seedsmen than the present one. Many of our stocks are contracted in Holland, Denmark, Germany and France. As these pages are written, the question of delivery from these foreign points is uncertain, although our growers think that they can supply us in full. Our prices are fixed with the idea that, if these growers deliver, we can supply choice seed at quotations given in this book, but necessarily there is some uncertainty on this entire question.

PARCEL POST ZONES.

Chief Cities taking 2nd Zone rates	Cincinnati, Toledo, Indianapolis.
Chief Cities taking 3rd Zone rates	Pittsburg, Chicago, Johnson City, Tenn.
Chief Cities taking 4th Zone rates	Savannah, Ga., New York City, Kansas City, Mo.
Chief Cities taking 5th Zone rates	Augusta, Me., New Orleans, La., Bismarck, N. D.

2nd Zone.
5c for the 1st lb. and 1c additional for each additional lb. This holds to 50 lbs.

3rd Zone. 20-lb. Limit.
6c for 1st lb. and 2c each additional lb.

4th Zone. 20-lb. Limit.
7c for the 1st lb. and 4c per lb. additional.

5th Zone. 20-lb. Limit.
8c for the 1st lb. and 6c each lb. additional.

6th Zone. 20-lb. Limit.
9c for the 1st lb. and 8c each lb. additional.

7th Zone. 20-lb. Limit.
11c for the 1st lb. and 10c each lb. additional.

8th Zone. 20-lb. Limit.
12c per lb. straight.

SEED POSTPAID BY MAIL.

We prepay postage or express on all vegetables and flower seeds ordered by packet, ounce or quarter pound. **Quantities ordered above this amount go at purchaser's expense.**

We append herewith a table showing parcel post rates in effect October 20, 1914. This will show our customers the approximate amount of postage to add when ordering parcels by parcel post. We guarantee safe delivery, no matter how the goods are shipped. **When ordering by parcel post, please include postage with order.**

SPECIAL PRICES ON LARGE AMOUNTS.

COLLECTIONS

Special Premium Offer for 1915

In order to acquaint those of our customers who order garden seeds only, with the high quality of our field seeds, we offer the following premium. With each two dollar order for vegetable or flower seeds, we will send, when requested, as a special free premium, one ounce each of the following field seeds: Alfalfa, Dakota Acclimatized; each variety of our Soy Beans; each variety of our Seed Corn; Winter Vetch; Bromus Inermis; Tall Meadow Oats; Meadow Fescue.

This offer is made upon the condition that the garden seeds are ordered at regular prices, and no collection or special premium must be included; or, we will send this same collection with one dollar's worth of garden or flower seeds at regular catalogue prices and twenty-five cents additional; or, we will send the collection for 50 cents postpaid.

Customers who do not care to try our field seeds may select 50 cents worth of either flower or vegetable seeds as their free premium, when buying two dollars' worth of garden seeds at regular prices.

ONE DOLLAR COLLECTION

This collection is made up when we are not busy and it is on this point that we make our saving. The seeds are as choice as can be found anywhere; the varieties of the very best.

For one dollar we give you one packet each of

Beans—Keeney's Stringless Refugee Wax,
Beans—Kentucky Wonder Wax,
Beans—Burpee's Bush Lima,
Beet—Detroit Dark Red Turnip,
Beet—Lucullus Swiss Chard,
Cabbage—Copenhagen Market,
Cabbage—Glory of Enkuizen,
Celery—White Plume,
Cucumber—Fordhook Famous,
Cucumber—Davis Perfect,
Corn, Sweet—Peep-O-Day,
Corn, Sweet—Golden Bantam,
Corn, Sweet—Black Mexican,
Lettuce—May King,
Lettuce—Simpson's Early Curled.
Lettuce—Cos, White Paris,
Watermelon—Kleckley Sweet,
Muskmelon—Rockyford,
Muskmelon—Burrell Gem,
Onion—Yellow Globe Danvers,
Onion—Prizetaker,
Parsnip—Guernsey,
Pepper—Neapolitan,
Peas—Little Marvel,
Peas—Duke of Albany,
Radish—Vick's Scarlet Globe,
Radish—Long Icicle,
Squash—Summer Fordhook,
Squash—Turk's Cap,
Tomato—Earliana,
Tomato—Dwarf Champion,
Tomato—Ponderosa,
Turnip—Early Snowball.

FIFTY-CENT COLLECTION

For the small garden. For fifty cents we will send you one packet each of

Beans—Burpee's Bush Lima,
Beans—Kentucky Wonder,
Beet—Detroit Dark Red Turnip,
Cabbage—Copenhagen Market,
Cucumber—Fordhook Famous,
Corn, Sweet—Golden Bantam,
Lettuce—Simpson's Black Seeded.
Lettuce—Cos, White Paris,
Muskmelon—Rockyford,
Onion—Ohio Yellow Globe,
Parsley—Fine Double Curled,
Peas—Little Marvel,
Peas—Duke of Albany,
Radish—Long Icicle,
Tomato—Dwarf Stone.

TWENTY-FIVE CENT COLLECTION

For twenty-five cents we will give you one packet each of

Beans—Brittle Wax,
Cabbage—Copenhagen Market,
Corn, Sweet—Golden Bantam,
Peas—Little Marvel,
Radish—White Box,
Tomato—Bonny Best.

Spargel ASPARAGUS Esparrago

One of the earliest and most delicious spring vegetables. Every one should have a bed, and it is also profitable to grow for market. You can sow seed or set plants, either of which we will furnish you. The seed should be sowed in drills two inches deep, on good rich ground, cultivated throughout the summer, the plants not allowed closer than one inch apart. The following spring they are ready to set in beds. These beds should be deeply spaded and well enriched. The plants should be set about four inches deep, one to two feet apart, in rows four to six feet apart. Cultivate the first season. Each succeeding year a heavy dressing of manure should be applied. Salt is also beneficial and helps to keep down the weeds. Hard wood ashes are good. In cutting, remove all the shoots, no matter how small; cultivate frequently until the plants meet in the rows. In the fall, the tops, when ripe, should be cut and burned. One hundred plants should easily supply an ordinary family. Do not cut shoots too late in the summer.

CONOVER'S COLOSSAL. The standard variety. A luxuriant producer. The stalks large, green, early and tender. Pkt., 5c; Oz., 10c; ¼ lb, 25c.

COLUMBIAN MAMMOTH WHITE. This variety differs from Colossal in having white stalks instead of green. Shoots are tender and of excellent quality. Pkt., 5c; Oz., 10c; ¼ lb, 30c.

PALMETTO. A Southern variety with green stalks, very early and prolific; even and regular in its growth. Pkt., 5c; Oz., 10c; ¼ lb, 25c.

BONVALLET'S GIANT. A very strong growing, luxuriant asparagus, having the longest season of any. It is extremely rust-resisting and produces plants fit for cutting about a year sooner than other varieties. Pkt., 5c; Oz., 10c; ¼ lb, 30c.

EARLY GIANT ARGENTEUIL. A favorite Parisian variety, very largely used in France. It resists rust, grows vigorously and has excellent flavor. Pkt., 5c; Oz., 10c; ¼ lb, 30c.

Bohnen BEANS Habichuela

DWARF WAX BEANS

While beans will grow on poor ground, they appreciate good soil. If too much fresh manure is used, it may make them run too much to vine. They are warm weather plants and should not be sowed until after corn planting time when the ground is warm. They may be planted two to three feet part, covering the seed 1½ inches deep. When drilled they should be three to six inches apart in the drill. Frequent cultivations up to blossoming time are necessary. Cultivation should always be shallow. Avoid working among the beans when they are wet, as it tends to make them rust. Lima Beans should not be planted until the last of May. Pole Beans should be planted in hills four feet each way. A quart of Limas plants 100 hills; of the smaller sorts 200 hills. A quart of snap beans plants 150 feet of drill.

BRITTLE WAX. Very early. A splendid variety, the pods almost perfectly round, about 5½ in. long, fat, very brittle, no strings, splendid quality. The yield in our trial grounds was good. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $1.50; Bu., $5.25.

ROUND POD KIDNEY

BURPEE'S NEW KIDNEY WAX. Moderately early. The pods, with us, about six inches, flat, very meaty, brittle, with no strings and a good yield. The quality of this bean is excellent. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $1.50; Bu., $5.25.

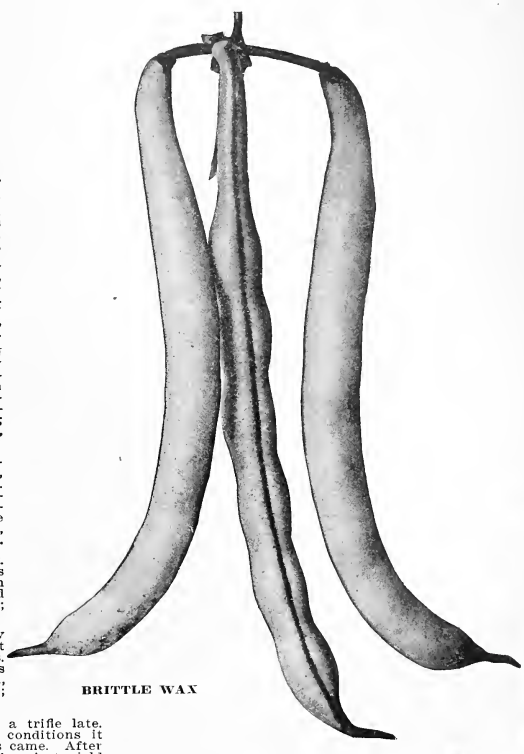
CHALLENGE BLACK WAX. Moderately early. Pods about 4 inches, meaty, brittle, with no strings, excellent quality and a good yield. The crop of this variety is very small this season. Pkt., 10c; Pt., 30c; Qt., 40c; Pk., $1.40; Bu., $5.00.

CURRIE'S RUST PROOF GOLDEN WAX. Very early. This variety has handsome, flat pods, moderately meaty, five inches long, with some strings. The yield is unusually heavy. We find it to be entirely free from rust. Pkt., 10c; Pt., 25c; Qt., 40c; Pk., $1.40; Bu., $5.00.

DAVIS' KIDNEY WAX. The mid-season sort, pods 6 inches, smooth, fairly meaty, has some strings. The yield is excellent. This variety is excellent, used dry for baking, as a string bean, use while the pods are young. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $1.45; Bu., $6.00.

GOLDEN EYE WAX. Fairly early. Pods 5 inches, flat, meaty, has strings. Should be used when young. It is free from rust, and good yielding. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $1.75; Bu., $5.00.

GOLDEN WAX. A medium early variety, good yielding, pods about 4 inches, flat, yellow, stringless. A good rust resisting bean. Ours is the best Grenell strain. Pkt., 10c; Pt., 25c; Qt., 50c; Pk., $1.75; Bu., $5.75.



BRITTLE WAX

HODSON WAX. This variety is a trifle late. When confronted with drouth conditions it made no yield at all until rains came. After that it came on and made the heaviest yield in our trial grounds. The pods are nearly round, fat, have strings; free from blight or rust. Pkt., 10c; Pt., 25c; Qt., 40c; Pk., $1.15; Bu., $5.00.

KEENEY'S RUSTLESS GOLDEN WAX. Early. A strong growing, rustless variety with flat pods, 4¾ inches long, brittle, not remarkably meaty, nearly stringless. Pkt., 10c; Pt., 25c; Qt., 40c; Pk., $1.50; Bu., $5.50.

PROLIFIC GERMAN BLACK WAX. (Cylinder Pod.) Quite early, prolific, pods about 4 inches, round, meaty, with few strings. Pkt., 10c; Pt., 25c; Qt., 40c; Pk., $1.50; Bu., $5.75.

BLACK PENCIL POD WAX. Early, productive, medium length pods, round, meaty, stringless. Pkt., 10c; Pt., 25c; Qt., 40c; Pk., $1.50; Bu., $6.00.

ROUND POD KIDNEY WAX. One of the very best mid-season varieties. The pods long and round, meaty, stringless, a good yielder; an excellent canning variety. Pkt., 10; Pt., 30; Qt., 50c; Pk., $1.50; Bu., $6.00.

NEW SURE CROP STRINGLESS WAX. Moderately early. Recommended for dry weather Pods about 6 inches long, nearly round, meaty and brittle; a good yielder. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $1.50; Bu., $6.00.

WARDWELL'S KIDNEY WAX. A favorite with market gardeners. Very early, pods handsome, flat, yellow, six inches long, stringless, moderately meaty; a reasonably good yielder. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $1.50; Bu., $6.00.

GREEN PODDED BUSH BEANS

FORDHOOK FAVORITE BUSH

FORDHOOK FAVORITE BUSH. A new bean of great merit. The vines are large, pods large, round, perfectly stringless and brittle. Nearly as early as any variety. It is very difficult to beat this variety. Pkt., 15c; Pt., 45c; Qt., 70c; Pk., $2.75; Bu., $10.00.

BOUNTIFUL. Early, very heavy yielder, 5½ inches long, flat, not very meaty, has strings. An excellent field variety for soup beans; a sure cropper; one of the old standard sorts. Pkt., 10c; Pt., 25c; Qt., 40c; Pk., $1.40; Bu., $5.25.

HORTICULTURAL CRANBERRY. Pods rather short, about four inches, flat; when ripening splashed with red. They must be eaten young before becoming tough, or else used as dry beans. The yield is excellent. Pkt., 10c; Pt., 25c; Qt., 40c; Pk., $1.40; Bu., $5.25.

REFUGEE OR ONE THOUSAND TO ONE. A rather late variety; one of the heaviest yielders in our trial grounds. Pods medium length, round, fat, have strings. Vines quite large. Pkt., 10c; Pt., 25c; Qt., 40c; Pk., $1.40; Bu., $5.25.

LONGFELLOW. Moderately early, pods about six inches, nearly round, smooth, fairly meaty, has strings. Pkt., 10c; Pt., 25c; Qt., 40c; Pk., $1.40; Bu., $5.25.

EXTRA EARLY REFUGEE. Early, with pods about five inches long; much earlier than Late Refugee. An excellent market bean and stands shipment well. Pkt., 10c; Pt., 25c; Qt., 40c; Pk., $1.40; Bu., $5.25.

KEENEY'S STRINGLESS REFUGEE WAX. One of the very finest dwarf snap beans. The pods about 5 inches, nearly round ,brittle, entirely stringless, prolific; a standard canning variety. Pkt., 10c; Pt., 25c; Qt., 50c; Pk., $1.65; Bu., $6.00.

STRINGLESS GREEN POD. Moderately early. Pods about four inches, meaty, entirely stringless; an excellent canning bean. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $1.45; Bu., $5.50.

GIANT STRINGLESS GREEN POD. Pods about five inches, smooth, moderately flat, brittle and stringless. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $1.40; Bu., $5.40.

LONG YELLOW SIX WEEKS. Pods five inches, flat, moderately meaty, has strings Must be eaten when young, but makes an excellent shipper. Pkt., 10c; Pt., 25c; Qt., 40c; Pk., $1.35; Bu., $5.00.

VALENTINE EXTRA EARLY. Moderately early. Pods four inches, round, meaty, has strings. Yield is good, and the variety is very much liked by market gardeners. Pkt., 10c; Pt., 25c; Qt., 40c; Pk., $1.40; Bu., $5.25.

BOSTON SMALL PEA. A standard field variety that yields very well, produces small, white peas, suitable for soup or baking. One of the best for this purpose. Pkt., 10c; Pt., 20c; Qt., 35c; Pk., $1.25; Bu., $4.25.

FULL MEASURE. A rather early variety. Pods about 4½ inches, round, fat, meaty and stringless; an excellent shipper, or good for home use. Pkt., 10c; Pt., 25c; Qt., 40c; Pk., $1.40; Bu., $5.25.

BURGER'S STRINGLESS GREEN POD. A decidedly early and very prolific handsome bean, pods five inches long, round, fat, with no strings. (Very short crop.) Pkt., 10c; Pt., 40c; Qt., 60c; Pk., $2.50; Bu., $10.00.

DUTCH CASE KNIFE. Moderately early. Pods 4½ inches, flat, fairly meaty, have strings, are excellent for dry beans. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $1.50; Bu., $6.00.

KENTUCKY WONDER OR OLD HOMESTEAD. An excellent bean, heavy yielding, a good quality. Pods five inches, round, meaty, brittle, with no strings. Pkt., 10c; Pt., 30c, Qt., 50c; Pk., $1.50; Bu., $6.00.

KENTUCKY WONDER WAX. A striking bean, very handsome and very prolific, early, pods five inches long, light yellow, flat, meaty, have some strings. This was the best yellow-podded pole bean in our trial grounds this season. Pkt., 10c; Pt., 40c; Qt., 60c; Pk., $2.25; Bu., $8.00.

LAZY WIFE. Mid-season. Pods about 3½ inches long, green, flat, fairly meaty, brittle, with no strings; good for shelling. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $1.80; Bu., $6.75.

WHITE CREASEBACK. A heavy yielding, green pod variety, pods five inches, round, meaty, brittle, with few strings. The pods all mature together and yield heavily; also good to shell. Pkt., 10c; Pt., 30c; Qt., 45c; Pk., $1.60; Bu., $5.75.

KENTUCKY WONDER WAX

BUSH LIMA BEANS

LIMA CHALLENGER

BURPEE'S BUSH LIMA. A standard early variety, the pods about four inches; a good yielder and good quality. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $1.75; Bu., $6.50.

BURPEE'S IMPROVED BUSH LIMA. A moderately early, heavy yielding variety, with pods a trifle larger and more beans to the pod than with the original Burpee's Bush. Pkt., 10c; Pt., 35c; Qt., 65c; Pk., $2.50; Bu., $9.00.

FORDHOOK BUSH LIMA. This variety is decidedly our preference among the Bush Lima Beans. It is nearly as early as any, the pods about four inches, medium size, well filled, the beans very plump and fine quality. With us it yields continuously all summer, in this respect being greatly superior to any other sort. Pkt., 10c; Pt., 35c; Qt., 75c; Pk., $2.75; Bu., $10.00.

HENDERSON BUSH LIMA OR DWARF SIEVA. Rather a small plant and small pods, about three inches long; three small seeds to the pod. The earliest Bush Lima; a heavy yielder and good quality. Pkt., 10c; Pt., 30c; Qt., 45c; Pk., $1.75; Bu., $6.00.

POLE LIMA BEANS

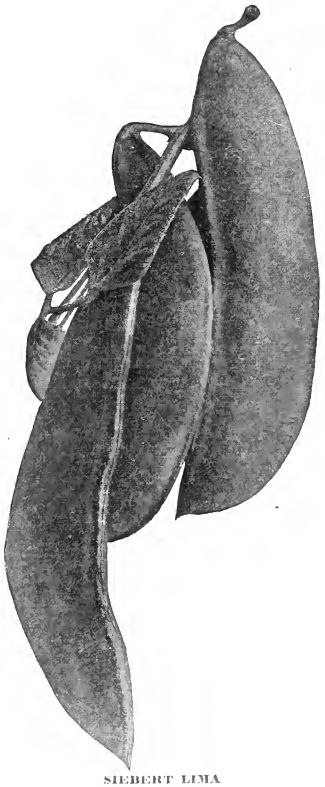
CHALLENGER. Pods about 4½ inches, medium sized, about four beans to the pod; an extra good yielder, the beans not quite as large around as some other varieties but very plump; one of the earliest varieties. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $2.00; Bu., $7.00.

CARPINTERIA. Rather late. Pods 4¼ to 5 inches, about four beans; the pods large, yield good. The beans are very large, rather flat and excellent quality. Pkt., 10c; Pt., 30c Qt., 50c; 4 Qts., $1.25; Pk., $2.00; Bu., $7.00.

IDEAL LIMA. Medium in maturity. Pods about three inches, rather smaller than average; the seed about as large, however, as other varieties. A good yielder. Pkt., 10c; Pt., 30c; Qt., 60c; Pk., $2.25; Bu., $8.00.

LARGE WHITE LIMA. The old standard strain. Medium in maturity, pods four inches, medium size. The beans medium sized to large; a good yielder. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $1.85; Bu., $7.00.

KING OF THE GARDEN LIMA. A large podded, heavy yielding, medium early variety. The pods 5 to 6 inches, very broad; the beans nearly as large as Carpinteria. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $1.80; Bu., $6.75.



SIEBERT LIMA

SIEBERT'S EARLY LIMA. Medium early. Pods about 4¾ inches with four beans. Beans average size and plump; an excellent yielder. Pkt., 10c; Pt., 30c; Qt., 50c; Pk., $1.80; Bu., $6.75.

SMALL SIEVA. Small, pods about three inches, with three beans. The beans much smaller than other varieties of Limas. Very early, prolific and good quality. Pkt., 10c; Pt., 30c; Qt., 45c; Pk., $1.75; Bu., $6.00.

LEVIATHAN. Moderately early. Pods four inches, medium size. Beans plump and medium size; a good yielder. Pkt., 10c; Pt., 30c; Qt., 55c; Pk., $1.85; Bu., $7.25.

Spargel Kohl BROCCOLI Broculi

Sow as soon as the ground can be worked in the spring, in shallow drills. When plants are about four inches high, set out two feet apart each way. Cultivate same as cabbage in rich soil and use the same remedies for insect attacks.

A vegetable similar to the Cauliflower but hardier; can be grown farther north than Cauliflower. It requires similar cultivation and treatment to Cauliflower.

LARGE WHITE EARLY FRENCH. Plants very hardy, vigorous; heads white, compact, and all good quality. Medium sized. Pkt., 10c; Oz., 30c; ¼ lb, $1.00.

Rosenkohl BRUSSELS SPROUTS Bretones de Bruselas

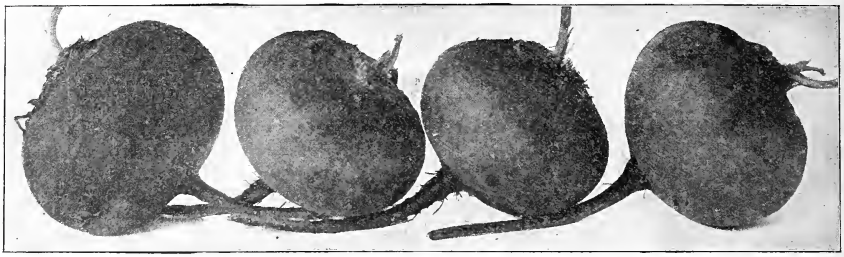
Plant in rich soil in hills two feet apart each way, one plant to the hill.

Brussels Sprouts are miniature cabbages formed on a plant stalk. They should be handled about like cabbage, but must be started early in this latitude or they will not mature heads.

LONG ISLAND IMPROVED. A variety much used for the New York market. Dwarf habit, very prolific. Pkt., 5c; Oz., 15c; ¼ lb, 40c.

PARIS MARKET. A standard sort in most parts of the country, the sprouts being of very delicate flavor. Pkt., 5c; Oz., 15c; ¼ lb, 40c

Rube **BEET** Remolacha



CROSBY EGYPTIAN

Beets do best on rather light, rich soil, well manured. If desired for very early use they may be sowed in hot bed and transplanted. For main crop, sow as soon as the ground is fit to work in drills 18 inches apart, 1 inch deep. For winter use, the turnip varieties may be sown as early as June and the seed covered two inches. The roots may be stored in a cellar, covered with sand or sandy soil, or they may be kept out doors in pits such as are used for apples and potatoes.

KELWAY'S CRIMSON GLOBE. A very dark, very fine shaped variety which we were fortunate enough to secure direct from the originator, the great Kelway House of England. In form and quality this variety can hardly be excelled. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, $1.00.

BASTIAN'S EARLY TURNIP. Largest of the turnip shaped beets. Bright red exterior; flesh purplish red zoned with white. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 75c.

BASSANO. Turnip shaped; early; excellent for table use; tops make good greens; flesh in zones of white and pink. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 75c.

DETROIT DARK RED TURNIP. Deservedly most popular sort. Turnip shaped, smooth and uniform. Top small; skin dark; blood red; flesh dark, zoned with a lighter shade. Excellent for market gardeners or home use. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 90c.

DEWING'S IMPROVED BLOOD TURNIP. Largely used for main crop; tops medium sized; roots turnip-shaped; flesh crimson, red zoned with lighter shade. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 85c.

KELWAY'S CHOICE DWARF DARK. A half long variety, very dark colored and tender, and of the very best flavor. It has a small top, is rich looking, smooth and excellent for exhibition. We were fortunate enough to secure this beet direct from its originator, and our stocks are simply as good as they can possibly be. Pkt., 10c; Oz., 15c; ¼ lb, 45c; lb, $1.50.

All of our beets are grown for us by the greatest growers in the world. Each root must pass a critical examination before being planted for seed. In fact, the pains taken with the table beets is second only to that taken with the sugar beets. It looks impossible to improve the methods used with either one.

EARLY BLOOD TURNIP. Smooth, round roots, medium sized. Rather later in maturing than Detroit Dark Red. Flesh deep red, zoned with lighter shade. Excellent for summer and autumn use. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 85c.

ECLIPSE. Very early. Especially desirable for home garden or market use. Tops small; roots deep red; smooth, flesh bright red zoned with a lighter color. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 85c.

EDMAND BLOOD TURNIP. Unusually attractive beet. Very desirable for market gardeners. Roots smooth, round, color lighter than Detroit. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 90c.

EXTRA EARLY EGYPTIAN. A good variety for forcing or first early crop out doors. Small tops; flesh medium dark; roots rather flat on the bottom. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 90c.

CROSBY'S EGYPTIAN. Roots flattened; globe-shaped; very smooth and uniform. An excellent market gardener's sort or for home use. Extremely early; color, rather dark. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, $1.00.

HALF LONG BLOOD. Half long, deep red beet; uniform and smooth; flesh dark. Good for winter. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 90c.

SWISS CHARD OR SPINACH BEET

Used extensively for greens and excellent for this purpose; a few plants producing all summer and being very economical of space. The quality is excellent, usually liked better than beets. Sow early in spring in drills sixteen inches apart, thin to six inches in the row. The leaf stems may be cooked like asparagus, or make good pickles. One ounce is sufficient for a medium sized family.

LUCULLUS. Plants grow about 2½ feet high, stalks fully as large and thick as Rhubarb, of excellent quality, leaves heavily crumpled and savoyed. Leaves are cooked like Spinach, the stalks like Asparagus. Pkt., 5c Oz., 10c; ¼ lb, 20c; lb, 65c.

NEW SWISS CHARD, LUCULLUS

MANGEL WURZEL

Mangel Wurzels require deep soil that has been plowed deeply and well filled with manure. Sow in May or June in rows 18 inches to two feet apart; thin to eight inches in the row. As soon as frost occurs, dig the crop. They may be heaped about six feet deep on a dry, sloping situation, covered at first with canvas, later with six inches of straw, corn stalks, etc., with a light layer of earth on top. When this surface soil becomes frozen, six or eight inches more earth should be placed over it. This gradual covering prevents heating and the roots keep in perfect order. Sow about six pounds seed per acre.

GIANT YELLOW INTERMEDIATE. A large, smooth variety, grows two-thirds out of ground, easily pulled, comparatively small top, good keeper and heavy cropper. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 50c. Express not paid, 5lb, $1.50; lb, 45c; 10 lb, $3.00.

GOLDEN TANKARD. Smooth, yellow fleshed, with large roots which taper quickly at the bottom. Tap root small, grows largely out of ground and easily harvested, a heavy yielder. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 50c. Express not paid, 5 lb, $1.50; lb, 45c; 10 lb, $3.

MAMMOTH PRIZE LONG RED. One of the heaviest yielding varieties; roots one-half to two-thirds out of ground, tapering sharply, flesh white with rose colored rings. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 50c. Express not paid, 5 lb, $1.50; lb, 45c; 10 lb, $3.00.

ECLIPSE

SUGAR BEET

HOW OUR SUGAR BEET SEED IS GROWN.

The care given this seed is wonderful. A field containing probably 250,000 roots is dug, and experts go over them, selecting from the total only 2,500. Again experts go over this smaller number, and take out little cores for analysis. After receiving the laboratory report these 2,500 are reduced to 250 of the very choicest.

DETROIT DARK RED

These 250 roots are cared for all winter, and in the spring are set out in a small plot of ground, one man given charge, with nothing else to do but watch over them. He nurses them in every possible way, even going so far as to make cloth covers for each plant, placing these over them when in blossom, thereby preventing cross-fertilization. Seed from these plants then goes to the fields as stock seed, and our seed comes to us from these fields. There are very few growers who take as much care as this of their seed.

Last summer we sent one of our directors to visit the leading growers' establishments in England, France, and other European countries, and we have our seed only from those reported to us as taking this remarkable amount of pains with their crop. The best European beet growers have always maintained a reputation for producing the very finest sugar beet seed, and there is certainly the best of reason for our securing our seed from such men.

KLEIN WANZLEBEN. This is extensively grown both for stock feeding and for the sugar beet factories. Roots a little larger than Vilmorin's Improved, tops rather large, yields heavily and easily grown. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 50c. Express not paid, 5 lb, $1.50.

LANE'S IMPERIAL. A variety used for stock feeding, large, smooth, rose colored, a heavy yielder. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 50c. Express not paid, 5 lb, $1.75.

VILMORIN'S IMPROVED. Grown both for sugar factories and stock feeding, a heavy yielder and good keeper. Our stock comes direct from France and is the very best obtainable. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 50c. Express not paid, 5 lb, $1.75.

GIANT HALF SUGAR ROSE. Used for stock feeding, a very heavy yielder, roots partly out of ground, easily harvested. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 50c. Express not paid, 5 lb, $1.75.

COPENHAGEN MARKET

ALL SEASON

Kohl CABBAGE Col repello

Early Varieties

Cabbage requires a reasonably rich soil, with good drainage and well manured. For early use, plants should be started in the greenhouse and set when danger of hard freezes is over, planting 12 to 18 inches apart in the row, rows two to three feet wide. For green worm one grower says to use an ounce of saltpeter dissolved in twelve quarts of water, sprinkled on with a short handled broom. Others recommend Hammond slug-shot. To prevent cabbage fly, use a dust of plaster, air-slaked lime, wood ashes or tobacco dust.

ALL SEASON. Matures for us about July 20th to 30th. The heads fairly large, uniform and dependable variety. Recommended for use either early or late. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.60.

EARLY DWARF FLAT DUTCH. Matures about July 25th. An excellent, large heading, smooth variety. Quite similar to Early Summer. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 60c; lb, $2.00.

COPENHAGEN MARKET. Matures about July 1st. This variety appears to stand in a class by itself. It is the very earliest sort in our trial grounds and also one of the very best. Uniform, with splendid sized heads; round and with only moderate amount of loose or outside leaves. We believe this to be the very best early cabbage on the market today and we know our stock to be of the very best. Pkt., 10c; ½ Oz., 25c; Oz., 45c; ¼ lb, $1.25; lb, $3.75.

EARLY JERSEY WAKEFIELD. Matures about July 10th. Conical, very solid, rather small, uniform. This variety has been standard for many years and is one of the best of the very early sorts. Our stock comes true and dependable. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.50.

EARLY WINNINGSTADT. Matures July 25th. Conical, fairly solid, decidedly uniform. Well recommended for making krout. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.50.

EXTRA EARLY EXPRESS. Matures about July 5th. Good sized, conical, uniform. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.10.

EARLY SPRING. Matures about July 5th. A rather small, flat, uniform, solid variety, occupying only a moderate amount of room. Uniform and good quality. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 65c; lb, $2.25.

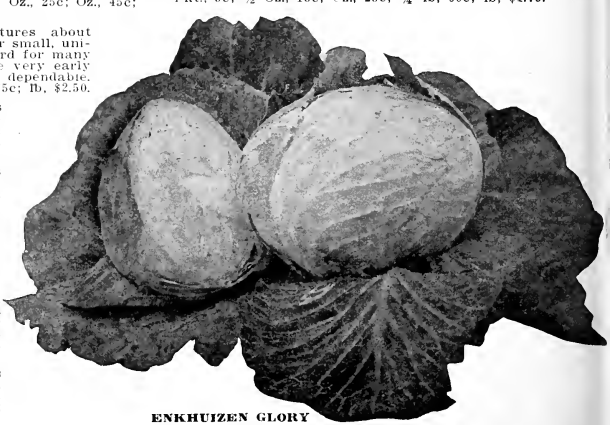
EARLY SUMMER. Matures July 20th. Heads large, uniform and solid. Flat and reasonably heavy. A dependable sort for second early or summer use. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 60c; lb, $2.25.

EUREKA FIRST EARLY. Matures about July 5th. Rather small, flat, solid, uniform. An excellent first early variety. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.60.

ALL HEAD. Matures July 20th to 30th. Reasonably uniform. Flat, solid, with short stem and moderate amount of outside leaves; quite similar to All Seasons and Early Summer. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.60.

BRUNSWICK. Matures about August 1st. A large summer sort; uniform, reasonably heavy and dependable. Similar type to Early Flat Dutch or Early Summer, but probably a little larger. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 60c; lb, $2.00.

CHARLESTON OR LARGE WAKEFIELD. Matures about July 10th to 15th. A standard variety. Rather large size with conical heads; a dependable sort. Our seed is selected with great care and can be depended upon. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 60c; lb, $1.75.



ENKHUIZEN GLORY

Late Varieties

IMPROVED AMERICAN SAVOY

DANISH BALL-HEAD. (Short Stemmed.) This is exactly like the Danish Ball-Head Winter except that a shorter stem has been developed for it, which is desirable with many growers. It is fully equal to the tall-stemmed strain. Our seed is of the highest breeding, Denmark grown. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 65c; lb, $2.25

IMPROVED AMERICAN SAVOY. We consider this the best variety of Savoy which we have found; heads large and solid, stalks short, very uniform; a sure header; does not burst badly; leaves uniformly crumpled. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 60c; lb, $2.00.

PREMIUM FLAT DUTCH. A large heading, late variety, solid, uniform and of excellent quality; an excellent keeper; one of the standard varieties. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.60.

DANISH BALL HEAD

AUTUMN KING OR WORLD BEATER. A very large fall variety. Excellent for kraut or fall use. A very heavy cropper. Has small outside leaves. Not a good winter keeper. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 60c; lb, $2.00.

VOLGA. A variety which is recommended for sowing, either early or late. In our trial grounds it shows excellent uniformity. Rather quick maturity, a good type, excellent for marketing or for home use. The heads are moderately large when planted early. It is a larger cabbage than many of the very early sorts and must be given more room. Pkt., 5c; ½ Oz., 20c; Oz., 35c; ¼ lb, $1.00; lb, $3.00.

DANISH BALL-HEAD WINTER. (Tall Stemmed.) It would be difficult to praise this variety too highly. Its merits are so well known that it is becoming standard the country over. The heads are extremely hard, heavy, not too large, but weigh one-fourth more than other varieties of equal size, leaves fine grained and tender; a splendid keeper. Our strain is Danish grown, selected with greatest care and equal to any. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 60c; lb, $2.00.

VOLGA

SAVOY EARLY ULM. One of the earliest and sweetest Savoys with small, round, solid heads. The leaves are more crumpled than the Improved American. The quality is excellent. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 60c; lb, $2.00.

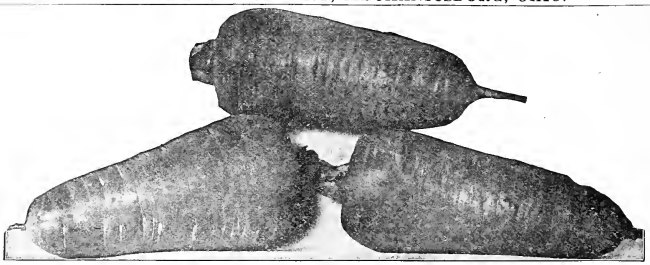
LARGE LATE DRUMHEAD. A very large, deep-headed variety with few outer leaves, stem medium length, sure heading, solid, good quality either for slicing or general purpose. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 50c; lb, $1.75.

MAMMOTH ROCK RED. The largest and surest heading, red cabbage. Stem medium length, head large, round, very solid, deep red color. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.60.

GLORY OF ENKHUIZEN. Matures about July 5th to 10th. In our trial grounds no other cabbage maturing at the time that this does, quite equals it. The heads are splendidly uniform, round, very attractive in appearance and the heaviest variety which we have at that time. Splendid either to market or for home use. Our stock of this great variety simply can't be beat. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.60.

SUCCESSION. Matures about August 5th. Quite large, flat and uniform. One of the largest of the early summer varieties. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.60.

SUREHEAD. Matures about July 25th. A very desirable sort; uniform, solid, every plant heading. We consider this one of the best of the flat Dutch type summer cabbages and our stock is as good as any. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 60c; lb, $2.00.



CHANTENAY CARROTS.

Mohren CARROTS Zanahoria

IMPROVED LONG ORANGE

In good, rich soil, thoroughly worked, will produce satisfactory crops. It is necessary to have a good seed bed in order to secure a perfect stand. Sow in early spring in drills 15 to 18 in. apart, thin the plants to 3 or 4 inches, cover the seed only one-half inch, cultivate frequently and keep the weeds down by hoeing. Carrots are seldom sufficiently appreciated. Properly cooked they are extremely delicate and quite nutritious. They may be used either when an inch in diameter or when full grown.

CHANTENAY. A fairly early, very popular variety, about five inches long, 2½ inches diameter. Nearly deep red, fine grained, with excellent flavor. Pkt., 5c; Oz., 15c; ¼ lb, 35c; lb, $1.25.

IMPROVED DANVERS HALF LONG. Six to eight inches long, 2½ inches diameter, smooth, heavy yielding, good quality. Pkt., 5c; Oz., 15c; ¼ lb, 35c; lb, $1.25.

LONG RED OR LONG ORANGE IMPROVED. About nine inches long, two inches in diameter. Smooth, fairly late, extra quality. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, $1.20.

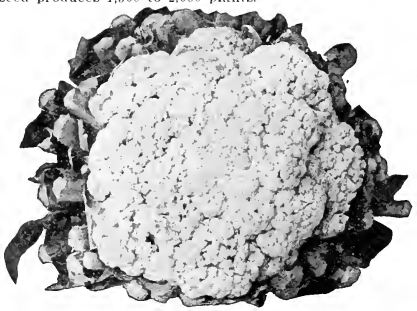
OX-HEART OR GUERANDE. About three inches long, two inches in diameter. Rather conical shape, quite early. It has excellent quality. Pkt., 5c; Oz., 10c; ¼ lb, 35c; lb, $1.25.

EARLA SCARLET HORN. A very early variety, suitable for either outdoor use or forcing. Roots about 3 inches long and 2 inches in diameter, carrying their length well to the tip, but tapering abruptly at the bottom. Reddish orange color. Excellent quality. Pkt., 5c; Oz., 10c; ¼ lb, 35c; lb, $1.25.

LONG WHITE BELGIAN. Used for stock feeding purposes, grows half out of ground, 15 in. long, sometimes 4 in. in diameter, very productive. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 75c.

Blumenkohl CAULIFLOWER Coliflor

Use the same culture as for cabbage, except that they must have fertile soil and plenty of water. The later varieties require the entire season to perfect themselves. One ounce of seed produces 1,500 to 2,000 plants.



DANISH SNOWBALL.

DANVER'S HALF LONG.

EARLY SNOWBALL. The early maturing strain of short leaved Snowball type of Cauliflower; also as reliable and dependable as any variety grown. The heads large, solid and beautifully white. Our stock is grown by an expert in Denmark, selected with great care, and we are sure is unsurpassed by any. ½ Pkt., 15c; Pkt., 25c; ¼ Oz., 75c; Oz., $2.50; ¼ lb, $7.50.

DANISH GIANT. A trifle later than the Danish Snowball, but excellent for resisting dry weather and unfavorable conditions. ½ Pkt., 15c; Pkt., 25c; ¼ Oz., 75c; Oz., $2.50; ¼ lb, $8.50.

LARGE ALGIERS. One of the very best varieties; will stand frost that injures other sorts. The plants large but upright, the leaves protecting the heads admirably. Pkt., 10c; ¼ Oz., 30c; Oz., 75c; ¼ lb, $2.00.

EXTRA EARLY DWARF ERFURT. Not quite as early as Danish Snowball. All dwarf habit with short outside leaves. A vigorous grower and sure header. ¼ Oz., 25c; ½ Oz., 75c; Oz., $2.50; ¼ lb, $8.50.

Sellerie CELERY Apio

WHITE PLUME.

Sow indoors from February 20th to April 20th, or outdoors in April. Keep the small plants free from weeds. Do not cover the seed too deep; keep the bed moist, almost wet, until the seed germinate. The seed will not germinate in hot-bed at a temperature above 60 degrees, and outdoors it sometimes requires partial shading, as with a lattice work of lath, to keep the hot sun from ruining the beds. Such lattice work should admit just about one-half the sunlight. Transplant when about four inches high, cutting off tops as well as part of the root. The soil must be rich, and water for irrigation is vitally necessary. Best results may be obtained by setting last of June or first of July, although sometimes the middle of August is not too late. This, of course, depends upon the latitude and local climate. In setting we prepare wide trenches, six or seven inches deep, four to six feet apart. The plants are set about six inches apart and half of the outer leaves cut off, the soil firmly packed about the roots. Water is very necessary until the plants get well started. From then on the weeds must be thoroughly kept down by cultivation and hoeing. Blanching is done either with soil or with two wide boards held in place with stakes or wire hoops at the top. The latter method is necessary when blanching in hot weather for the early market. Do not disturb the plants while they are wet, as this increases tendency to rust.

Celery growers are well aware that the quality of their seed is absolutely necessary. Probably no vegetable seed that we have is more important in this respect; not only must the seed grow, but it must be of the choicest strain. American grown seed of Golden Self-Blanching Celery never gives satisfactory results. The French growers have taken great pains with this variety, and are the most successful in producing it. Last summer we sent one of our directors to the establishments of the greatest French Celery growers, and we are pleased to say that we feel positive that the stocks which he selected are the finest in the world. We are offering them at no higher prices than you would pay for the ordinary seed.

EVANS' TRIUMPH. A large growing, late sort, requiring the entire season to mature, but very large and heavy when ready for market. It blanches nearly white, crisp, tender and good flavor. Pkt., 5c; ½ Oz., 10c; Oz., 20c; ¼ lb, 50c; lb, $1.50.

GOLDEN SELF BLANCHING. The most popular variety grown. Although the stalks are large and heavy, they blanch excellently and the flavor is excelled by none. In color it is beautiful golden yellow. Our seed of this variety is French grown, selected with greatest care, can not be excelled. Pkt., 15c; ¼ Oz., 50c; ½ Oz., 90c; Oz., $1.50; ¼ lb, $5.50; lb, $20.00.

GIANT PASCAL. A very large, late variety, requiring the entire season in which to mature, but an excellent shipper, a good market sort. It blanches to a greenish-white; is an excellent keeper. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 80c; lb, $2.75.

GIANT WHITE SOLID. A large growing, vigorous variety, which blanches to a yellowish white and matures a trifle earlier than Giant Pascal. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 80c; lb, $2.75.

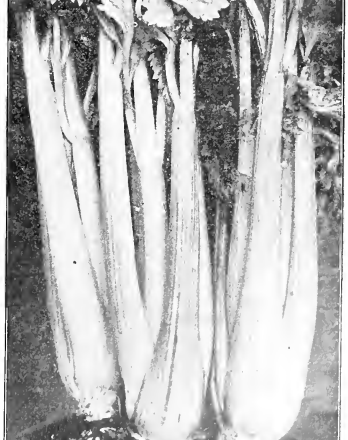
WHITE PLUME. This is one of the earliest varieties and very largely used. The stalks are medium sized, easily blanched to a clear white. It comes to the market earlier than other varieties and is recommended partly on that account. The quality is excellent. All our celery is French grown and can not be excelled. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.25.

WINTER QUEEN. A winter variety that is recommended as one of the very best keepers. It has a large amount of heart, is stout and heavy; blanches to a cream white. Pkt., 5c; ½ Oz., 15c; Oz., 20c; ¼ lb, 55c; lb, $1.75.

CHICORY

WILOOF OR FRENCH ENDIVE. A variety used as a winter salad, served and eaten like Cos Lettuce. Seed should be sown in open ground in June in drills 12 to 18 inches apart, allowing the plants to stand not closer than three inches. The parsnip shaped roots are lifted in the fall, the leaves cut off and then stored in soil in a cool place until wanted for forcing. Plant in trench about 16 or 18 inches deep, upright 1½ to 2 inches apart, allowing neck of root to come within nine inches of the level of the trench. Fill the trench with light soil, or if a quicker growth is desired, use a mulch of fresh manure two feet deep. In one month the heads are ready to cut off, with a small portion of the neck of the root attached; or the roots may be planted out in the spring in rows 28 inches apart, where they will produce delicate creamy leaves in the garden. Pkt., 10c; Oz., 25c; ¼ lb, 60c.

LARGE ROOTED OR COFFEE. Used as a substitute for coffee, the root being dried, roasted and ground. Leaves also used as a salad during early spring months. To secure good roots the soil should be light, rich and deeply worked, plants thinned out to stand 4 to 6 inches apart. Sow seed early in the spring. Pkt., 5c; Oz., 15c; ¼ lb, 50c.



GOLDEN SELF BLANCHING.

COLLARDS

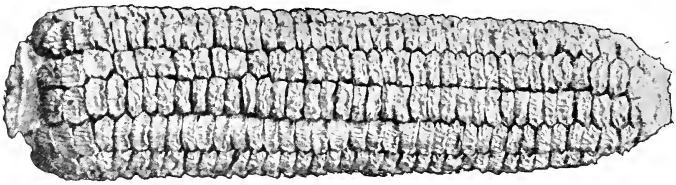
Sow seed as for Cabbage, in June, July and August for succession. When a month old transplant in rows a foot apart each way and cultivate thoroughly.

GEORGIA. This is the principal Southern variety used for greens; grows vigorously with light green leaves somewhat resembling cabbage, but growing only in a cluster and not heading. Pkt., 5c; Oz., 10c; ¼ lb, 35c; lb, $1.25.

CORN SALAD

This plant does not thrive during warm weather and seeds should be sown thinly in drills during August, September and October. Fresh leaves will then be ready during the fall and winter months; should be protected by a light mulch of hay or straw applied after cool weather sets in. One ounce plants 30 feet of row.

LARGE SEEDED. Used as a salad. A small, quick growing plant for fall, winter or spring use. May be sown either in spring or fall. If sown in fall, cover before severe cold weather with straw or coarse litter. They do well on rich ground. Price, Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

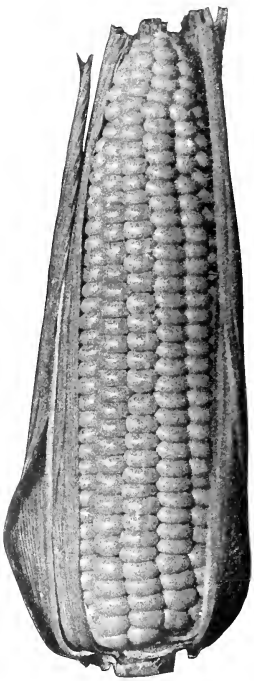


WING'S GOLDEN SUGAR.

Speise Mais SWEET CORN Maiz dulce

Plant either in hills three feet apart each way, or in drills about three feet apart, and one or two stalks every ten inches. Break off suckers, cultivate carefully. For a succession we use ourselves, Peep-O-Day, Golden Bantam, Black Mexican and Country Gentleman. These may be planted at the same time and will follow each other nicely.

WING'S GOLDEN SUGAR (New). We are decidedly proud to introduce this new variety of sweet corn to our customers and proud of being the first to bring it out. It is about a week later than Golden Bantam, fodder about six feet tall and ears about one-half larger than Golden Bantam. It is prolific and it possesses all of the sweetness and delicious flavor of the Golden Bantam. Up to this time the Golden Bantam has been acknowledged to be the sweetest and finest flavored sweet corn in the world. This one is just as good and has the advantage of being more prolific. Certainly, it will be difficult to over-estimate the importance of this variety, and we see no reason why it should not become one of the greatest and most important on market. Pkt., 15c; ½ pt., 25c; Pt., 40c; Qt., 60c; ½ Pk., $1.50; Pk., $2.50; Bu., $9.00.



PEEP-O-DAY.

KENDAL'S GIANT. Matures August 1st. Fodder 6 ft.; ears 6 in. Rather large in diameter. Grain broad, irregular. No air space. An attractive looking variety to sell and better than the average sort to eat. Pkt., 5c; Pt., 25c; Qt., 40c; ½ Pk., 65c; Pk., $1.10; Bu., $3.75.

EARLY MAMMOTH. Matures for us August 4th. Ears 9 in.; fodder 7 ft. This variety gives a man lots for his money, the yield being good, the ears large, making an attractive sort to market. It is moderately sweet, better in this respect than Country Gentleman, which matures at about the same time. Pkt., 5c; Pt., 20c; Qt., 35c; ½ Pk., 65c; Pk., $1.10; Bu., $4.00.

LATE MAMMOTH. Matures for us about August 17th. Fodder about 3 ft., 6 in.; ears about 6 One of the largest eared varieties producing well. The rows are straight, grain medium sized. Pkt., 5c; Pt., 20c; Qt., 35c; ½ Pk., 55c; Pk., $1.00; Bu., $3.50.

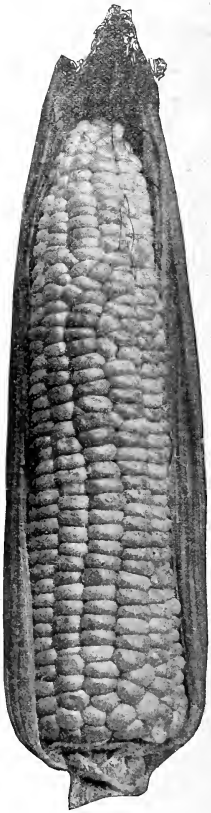
MAMMOTH WHITE CORY. Matures for us July 17th. Fodder about 3 ft., 6n in.; ears about 6 in. The grain is rather broad; the ear attractive looking; yields well. A good variety for market gardeners. Pkt., 5c; Pt., 25c; Qt., 35c; ½ Pk., 65c; Pk., 1.10; Bu., $4.00.

EARLY MINNESOTA. Matures about July 27th. Fodder 6 ft.; ears 8 in. long, slender, with little air space; grain rather broad; sweeter and better to eat than most sorts. Pkt., 5c; Pt., 20c; Qt., 35c; ½ Pk. 55c; Pk., $1.00; Bu., $3.50.

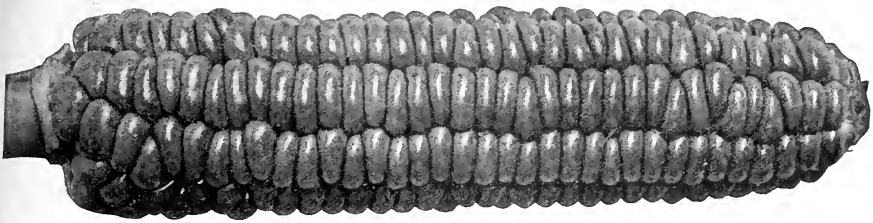
PEEP-O-DAY. Matures July 20th. Fodder 4 to 5 ft.; ears 6½ in. This is one of our favorite, very early varieties. Not quite as sweet as some others, but yields well, is tender and good to eat. Pkt., 5c; Pt., 25c; Qt., 40c; ½ Pk., 65c; Pk., $1.10; Bu., $4.00.

EARLY EVERGREEN. Matures for us August 1st. Fodder 7 ft.; ears 7½ in.; grain rather similar to Stowell's Evergreen, narrow, deep and tender; possibly a little sweeter than Stowell's. An excellent sort to market. Pkt., 5c; Pt., 20c; Qt., 35c; ½ Pk., 55c; Pk., $1.00; Bu., $3.50.

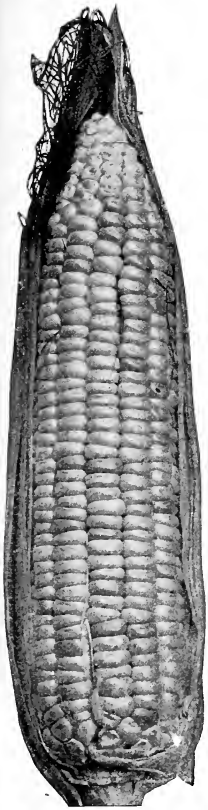
ADAM'S EARLY. Matures August 1st. Fodder 7 ft.; ears 8 in., broad grained; the ears well filled out with no air space. A good market variety. Pkt., 5c; Pt., 20c; Qt., 35c; Pk., 90c; Bu., $3.00.



KENDAL'S GIANT.



GOLDEN BANTAM.



BLACK MEXICAN.

GOLDEN BANTAM. Matures for us June 23rd. Ears 6 in.; fodder 5 ft. This variety stands in a class by itself, no other variety that we know of, excepting Wing's Golden Sugar, anywhere near equalling it in sweetness and quality. It is good enough to suit the most critical. The ears are only moderate sized, but we consider the variety productive. The grain is rather broad; the ears well filled out without air space. We recommend this variety simply to eat. It is too good to sell. Pkt., 5c; ½ Pt., 15c; Pt., 25c; Qt., 40c; ½ Pk., 65c; Pk., $1.10; Bu., $4.00.

BLACK MEXICAN. Matures for us July 27th. Fodder about 7 ft. tall; ears about 9 in. long. The ears are slender with a moderate amount of air space. As its name implies, this corn turns black at maturity, but it is ready to eat just before it turns. It is one of the few genuine sweet varieties and very few sorts surpass it in quality. Pkt., 5c; Pt., 25c; Qt., 40c; ½ Pk., 75c; Pk., $1.25; Bu., $4.50.

COUNTRY GENTLEMAN. Matures for us August 7th. Fodder about 7 ft.; ears about 9 in.; the rows of grains irregular. Grain small, narrow, deep and tender, moderately sweet. There is no air space. The yield is heavy and it makes an excellent sort for marketing. Pkt., 5c; ½ Pt., 15c; Pt., 25c; Qt., 40c; ½ Pk., 65c; Pk., $1.10; Bu., $3.75.

CROSBY'S EARLY. A second early variety, with ears of moderate length and medium sized fodder. It is extensively used, especially in Maine, as a canning variety. It is attractive looking, both ears and grain well formed. Pkt., 5c; ½ Pt., 15c; Pt., 25c; Qt., 40c; ½ Pk., 65c; Pk., $1.10; Bu., $4.50.

CORY. Matures for us July 20th. Ears about 6 in.; fodder about 6 ft. The grain medium width, with a little air space. Attractive looking and markets well. Pkt., 5c; Pt., 20c; Qt., 35c; Pk., $1.00; Bu., $3.50.

ADAM'S EXTRA EARLY. Matures for us July 27th. Fodder about 6 ft.; ears about 7 in. The ears are rather large; the grain medium width, well filled out, making an attractive looking ear for market. Pkt., 5c; Pt., 20c; Qt., 35c; Pk., 95c; Bu., $3.25.

PERRY'S HYBRID. Matures August 1st. Fodder 7 ft.; ears 7 in.; grain rather narrow, deep, tender, considerably sweeter than the average sorts. We can recommend this variety for home use. Pkt., 5c; Pt., 20c; Qt., 35c; ½ Pk., 70c; Pk., $1.25; Bu., $4.50.

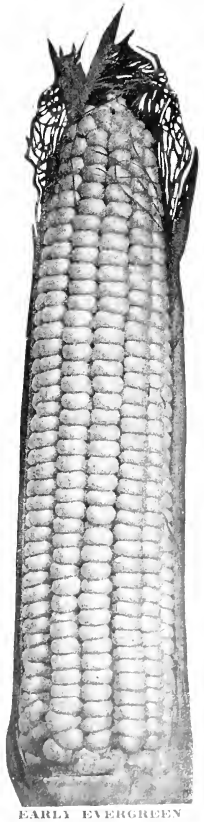
STOWELL'S EVERGREEN. Matures August 7th. Fodder about 7 ft.; ears about 8 in.; grain rather narrow, deep, tender, the ears having little air space; moderately sweet. This is the standard main crop variety the country over. Very prolific, a splendid sort to market, and while not as sweet as two or three other varieties, for its purpose it is hard to beat. Pkt., 5c; Pt., 20c; Qt., 35c; ½ Pk., 55c; Pk., 1.00; Bu., $3.25.

WHITE EVERGREEN. Matures about August 7th. Fodder 7 ft.; ears 9 in.; rows irregular; medium sized grain, with some air space. A typical evergreen corn, making a good yield and recommended as a good canning sort. Pkt., 5c; Pt., 20c; Qt., 35c; ½ Pk., 55c; Pk., $1.00; Bu., $3.50.

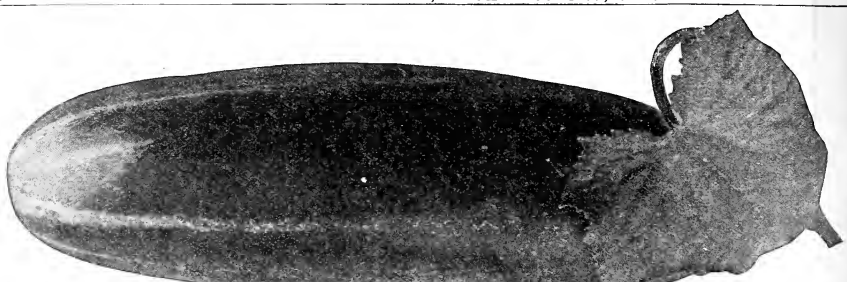
POP CORN

WHITE RICE. A standard variety with small short ears, very prolific and pops excellently. Pkt., 5c; lb, 20c. Express not paid, 5 lb, 40c; 10 lb, 65c; 25 lb, $1.40.

QUEEN'S GOLDEN. Differs from White Rice in being smoother, the grain yellow, but pops perfectly white, and a single kernel frequently expands to one inch in diameter. Pkt., 5c; ¼ lb, 10c; lb, 25c; 3 lb, 60c. Express not paid, 10 lb, $1.20; 25 lb, $2.50.



EARLY EVERGREEN



FORDHOOK FAMOUS.

Gurkin CUCUMBER Cohombro

Plant when the ground is warm, in hills three feet apart for the smaller varieties, four feet for the large ones. They need comparatively rich soil that is well worked. To protect from bugs we use ashes or tobacco dust mixed with turpentine, sprinkled on the ground about as soon as the plants appear.

CUMBERLAND. A hardy variety of white spine type, producing very freely, the color grey green. It is thickly covered with small, fine spines, except on the extreme stem end, and the surface is roughened in the manner desired for pickling. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.00.

COOL AND CRISP. Unusually attractive, white spine variety, very early, long, slender, rather pointed, and cuts above average. Good either for pickling or slicing. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.00.

DAVIS' PERFECT. A splendid, new variety, adapted either to greenhouse or outdoor use. When grown outdoors, frequently good enough to sell as hothouse fruit. Popular with market gardeners on account of its splendid quality and because it frequently sells above market price. It is long, slender, smooth, with excellent color, and cuts above average. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.25.

EXTRA EARLY WHITE SPINE. An unusually attractive and very popular variety. Excellent for forcing and a heavy yielder, commanding the highest market price. It is productive, of good size, very smooth and cuts unusually well. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.25.

ARLINGTON WHITE SPINE. A very attractive and popular sort in the South. Medium sized, early, a heavy yielder and cuts well. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.

IMPROVED LONG GREEN. A standard sort, adapted especially to long pickles, for which purpose it is excellent. The bulk of the crop of this variety matures rather late. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.00.

JAPANESE CLIMBING. The vines are unusually strong and throw out tendrils, making it suitable for training on trellises. Fruit is long and well formed, suitable either for pickles or slicing. Pkt., 5c; ½ Oz., 10c; Oz., 15c; ¼ lb, 40c; lb, $1.25.

WEST INDIA GHERKIN. A small oval variety, suitable for pickles only. It produces heavily; surface is decidedly rough; length about two to three inches. Pkt., 10c; Oz., 20c; ¼ lb, 50c; lb, $1.50.

KLONDIKE. A good strain of white spine, very popular in the South for shipping North; very dark green, smooth, retains its color well. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.00.

NICHOL'S MEDIUM GREEN. A standard, old variety, suitable either for pickles or slicing. Good quality and a good yielder. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.00.

WESTERFIELD CHICAGO PICKLE. A decidedly popular pickling variety that frequently commands more than market price. It is universally used by the great pickle manufacturers. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.00.

EVERBEARING. An early and very prolific variety, suitable for pickles. Fruit small, of good quality, and if kept gathered, very prolific. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.00.

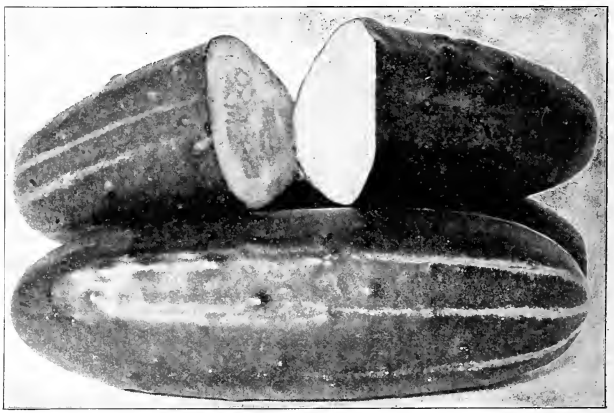
EARLY CLUSTER. A small, short variety, producing heavily and of good quality for pickles. If fruit is kept gathered, vines yield for a long time. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.00.

EARLY RUSSIAN. One of the earliest varieties; fruit about three in. long and very satisfactory for pickles, if kept gathered when young. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.00.

LIVINGSTON'S EVERGREEN PICKLING. A hardy, prolific variety, excellently adapted to pickling and also satisfactory for slicing; a good producer. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.25.

EARLY SHORT GREEN. An excellent variety for pickles, very early, producing well; is also adapted to slicing. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, 90c.

FORDHOOK FAMOUS. An unusually attractive looking variety, very long, slender, dark green, somewhat pointed and smooth. It yields well and cuts unusually well. Pkt., 5c; Oz., 15c; ¼ lb, 35c; lb, $1.10.



COOL AND CRISP.

CELERIAC

Sow seed the same as for Celery. Transplant into rows two feet apart and thin to nine inches in the row. Cultivate thoroughly. It is not necessary to earth up.

LARGE SMOOTH PRAGUE. This is the most popular variety with American growers. Roots nearly globular, comparatively smooth, with few roots at the bottom, flavor excellent. This variety excels all others in appearance, size and quality. Pkt., 5c; Oz., 25c; ¼ lb, 50c; lb, $1.50.

CRESS

Sow as early in spring as the ground can be worked, in good soil. Make shallow drills sixteen inches apart to cover seed one-half inch, pressing the soil down firmly. Thin to four or five inches apart in the row. For succession plant every two weeks. Use as salad before the flowers appear.

Watercress may either be started in pans or boxes of very moist earth and then transplanted to the bank or stream or pond where you wish them to grow, or the seed may be lightly covered with soil along the borders of streams. It can be grown in tubs of good soil in a shady place, if plenty of water is given.

BROAD-LEAVED WINTER OR UPLAND. A hardy perennial which stays green nearly the entire year; will do for use very early in the spring; eaten like Lettuce or boiled like Spinach. Pkt., 5c; Oz., 15c; ¼ lb, 40c.

CURLED OR PEPPER GRASS. An excellent flavored variety which may be cut two or three times. Pkt., 5c; Oz., 10c; ¼ lb, 25c.

TRUE WATER-CRESS. The well-known perennial, aquatic plant, very prolific and easily grown, with a mild pungent flavor, relished by nearly every one. Pkt., 10c; ½ Oz., 20c; Oz., 35c; ¼ lb, $1.25.

NEW YORK IMPROVED PURPLE.

Eierpflanze EGG PLANT Berengena

Sow in hot-beds early in spring, transplant when weather is warm and perfectly settled; set plants about 3 ft. x 2 ft. When cutting the fruit be careful not to destroy the roots of the plants. One ounce of seed produces 1,000 plants.

LONG PURPLE. A very early maturing, productive variety. Rich purple color with long fruit and excellent quality. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 85c; lb, $3.00.

NEW YORK IMPROVED LARGE PURPLE. A standard variety with large fruit, oval shaped and smooth, deep purple, early, productive, and of good quality. Pkt., 10c; ½ Oz., 20c; Oz., 30c; ¼ lb, 95c; lb, $3.50.

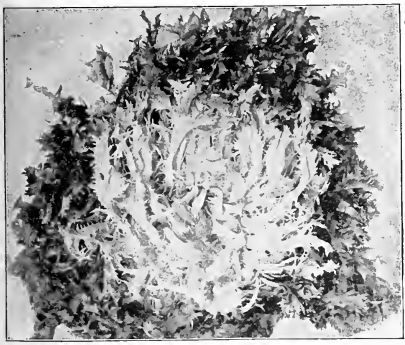
BLACK BEAUTY. Entirely spineless variety, ten days earlier than New York, attractive in form, broad and thick, purple color, a desirable variety for northern gardens. Pkt., 10c; ½ Oz., 20c; Oz., 30c; ¼ lb, 95c; lb, $3.50.

BLACK PEKIN. An early variety with nearly round fruit, black, glossy and solid, flesh white. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 85c; lb, $3.00.

DANDELION

Sow early in spring or up to June in good, warm soil, one-half inch deep, 18 inches apart, and cultivate well. They are ready to cut the following spring. They may be blanched by placing a couple of boards over the rows V-shaped, excluding the light and rendering them far superior to the wild varieties.

CULTIVATED OR FRENCH COMMON. A decided improvement on the wild dandelion, being almost double its size, very early and vigorous. Pkt., 10c; ½ Oz., 30c; Oz., 50c; ¼ lb, $1.50; lb, $5.00.



GREEN CURLED WINTER.

Endivien ENDIVE Endivia

This forms one of the very best fall and winter salads. It is easily blanched, crisp, delicate and fine flavored. Sow in June, July or August, in drills 15 to 24 inches apart, thin plants to one inch apart. When full grown or when hard frosts are appearing, we blanch by means of boards on each side of the plant, the boards held in place with stakes. Do not shut out all the light or the plants will rot.

BROAD-LEAVED BATAVIAN. This is the broadest leaved variety we sell, the leaves about the same size and shape as a large dandelion leaf. It makes a sort of head in center and is very easily blanched. One of the very best in quality. Pkt., 5c; Oz., 15c; ¼ lb, 35c; lb, $1.00.

GREEN CURLED WINTER. A standard variety for fall and early winter use, forming a dense mass of deeply divided leaves which blanch in the center quite easily to a cream white. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.25.

EVER WHITE CURLED. Differs from the Green Curled Winter in having grey green leaves throughout. In growth, habit and appearance after blanching, the two varieties are same. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.25.

GOURDS

Culture is the same as for squash.

GOURDS. Rapid growing climbers, making good trellis covers, and the fruit being interesting and ornamental.

DIPPER. Used for dippers, grows about twelve in. long, will last for years, holds one to four pints. Pkt., 5c; Oz., 20c.

JAPANESE NEST EGG. The size of a hen's egg; used for nesting purposes. Pkt., 5c; ½ Oz., 15c; Oz., 25c.

SUGAR TROUGH. Has hard, thick shell, light, durable and strong; holds about six or eight gallons. Pkt., 5c; Oz., 15c.

HERBS

A supply of herbs will be found very useful and necessary. They may be freshly gathered for flavoring soups, meats, etc., or tied in bunches and dried for use during the winter. In some cases the seed is saved. These can be dried and threshed when ripe. Varieties marked with an asterisk (*) are hardy perennials and need not be replanted except when old plants become exhausted.

SOUTHERN CURLED KALE.

ANISE. Seeds aromatic and carminative. Pkt., 5c; Oz., 10c.
BALM. For culinary purposes. Pkt., 5c; Oz., 15c.
BASIL. Sweet. Culinary herb used for flavoring soups, etc. Pkt., 5c; Oz., 10c.
BORAGE. Leaves used as a salad. Pkt., 5c; Oz., 15c.
***CARAWAY.** For sowing. Used in flavoring liquors and bread. Pkt., 5c; Oz., 10c.
***CATNIP.** Has medicinal qualities. Pkt., 5c; Oz., 30c;
CORIANDER. Seeds aromatic. For sowing. Pkt., 5c; Oz., 10c.
DILL. For sowing. Seeds used for flavoring vinegar. Pkt., 5c; Oz., 10c.
***FENNEL.** Sweet. Seeds aromatic; for flavoring. Pkt., 5c; Oz., 10c.
***HOREHOUND.** Has medicinal qualities. Pkt., 5c; Oz., 15c.
HYSSOP. Has medicinal qualities. Pkt., 5c; Oz., 15c.
***LAVENDER, True.** For oil and distilled water. Pkt., 5c; Oz., 20c.
MARJORAM. Sweet. Is used in seasoning. Pkt., 5c; Oz., 15c.
***ROSEMARY.** Yields an aromatic oil and water. Pkt., 5c; Oz., 35c.
***RUE.** Said to have medicinal qualities. Pkt., 5c; Oz., 25c.
SAFFRON. Is used in medicine, and also in dyeing. Pkt., 5c; Oz., 10c.
SAVORY. Summer. Is used as a culinary herb. Pkt., 5c; Oz., 10c.
***SAGE.** Broad-leaf. A culinary herb; also used in medicine. Pkt., 5c; Oz., 15c.
***THYME.** Broad-leaved English. Is used as a seasoning. Pkt., 5c; Oz., 35c.
***WORMWOOD.** Has medicinal qualities. Pkt., 5c; Oz., 25c.

SEA KALE

This long neglected vegetable has been brought into notice through the recommendation of the Department of Agriculture. It combines the flavor of Asparagus and Celery. The blanched stalks may be cooked like Asparagus or the leaves may be used as greens.

Sea Kale is usually grown from seed but may also be propagated from root cuttings. It has a long tap root which requires deep, rich soil. Plant in rows four to six feet apart. Seedlings usually yield a crop the third year, although some reports show earlier results As soon as the shoots show above the ground, blanch with earth or boards until ready for use.

LILY WHITE SEA KALE is more delicate in color and is considered superior to the old Sea Kale. Pkt., 10c; Oz., 20c; ¼ lb, 65c.

KALE OR BORECOLE

These plants do not form heads, but furnish an abundance of attractive leaves that are principally used for greens; also for garnishing. Seed may be sown from April to October. The young shoots which come up in the spring from the old stumps make excellent greens. One ounce of seed sows about 200 feet.

TALL GREEN SCOTCH CURLED. Similar to the Dwarf in every way, excepting larger. Grows 3 feet tall; productive, ornamental, hardy, excellent for market. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

SIBERIAN. Not so curly as Dwarf Green Kale. May be sown in September for spring greens. Very vigorous and hardy. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

DWARF GREEN SCOTCH CURLED. Hardier than Cabbage; leaves divided and curled about like Parsley. A heavy yielder; extensively grown, especially in the South, for shipment. They make excellent greens. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

Kohl Rabi KOHL RABI Col rabano

For summer use plant about as soon as the ground can be worked in the spring. For winter use, from middle of June to last of July. Cultivate as you would cabbage and cook as you would turnips, which they greatly resemble in flavor, although we think they are more delicately flavored. The large varieties make good stock feed.

EARLY WHITE VIENNA. Short-leaved, early, of much better flavor than the Large White, the leaves not over half the size. The roots are best used when only two or two and one-half inches in diameter. Pkt., 5c; Oz., 25c; ¼ lb, 60c; lb, $2.10.

EARLY WHITE VIENNA.

EARLY PURPLE VIENNA. Very similar to Early White Vienna, but the leaves are somewhat larger; quality about the same. Pkt., 5c; Oz., 25c; ¼ lb, 75c; lb, $2.25.

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Sow on good onion soil very early in the spring in drills 6 in. apart, 1 in. deep, thin out to 1 in. and transplant, or else thin to 6 in. Draw the earth about them when cultivating. They are used in soups or boiled.

BROAD SCOTCH OR LONDON FLAG. A hardy variety with large, broad leaves, strong, vigorous plant. Pkt., 5c; Oz., 20c; ¼ lb, 60c; lb, $2.00.

LARGE CARENTAN. Standard market variety, sometimes growing 3 in. in diameter; exceptionally hardy, of mild flavor. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.25.

MARTYNIA (For Pickles)

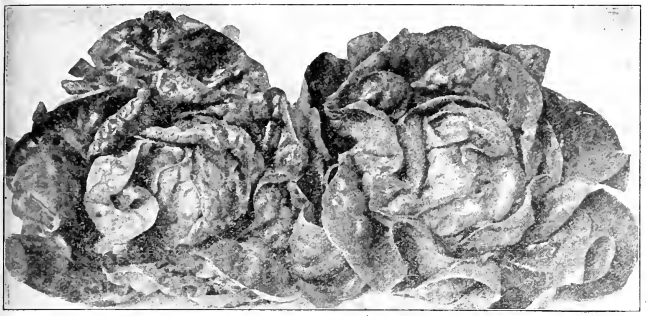
The seed may be sown in May in the open ground where the plants are to remain, sowing about three feet apart in each direction, or the seed may be sown in a hot bed and the seedlings afterwards transplanted. They are very productive and fine for pickles. Pick when small and tender and preserve the same as Cucumbers.

MARTYNIA PROBOSCIDEA. Pkt., 5c; Oz., 25c.

NAPLES OR FLORENCE FENNEL

If you are looking for something different we advise a trial of this. It is an easily cultivated annual, maturing quickly from seed sown in the spring. Plant the seed in rows 16 to 20 in. apart. Thin out so as to have the seedlings 5 or 6 in. apart and give plenty of water. The thickened bases of the leaf stalks form a bulb-like growth which is blanched like Celery. It resembles Celery in flavor, but has a sweet taste and a more delicate odor. It is usually eaten boiled. Pkt., 5c ¼ Oz., 10c.

Salat LETTUCE Lechuga



MAY KING HEAD LETTUCE.

Lettuce does better on good soil, moderately moist. The heading varieties should be thinned to eight inches apart in the row. When heads are not wanted, it is well to grow in a mass, plants being two inches apart. Seed may be sown as early as the ground can be worked or a succession may be made by repeated plantings. One ounce produces 3,000 plants.

MAY KING. (See illustration.) This variety is surely good enough to satisfy the most exacting. It does well under glass as well as outdoors. Practically every plant forms a beautiful compact head, which bleaches out to cream color, and is very finely flavored. It matures early, and lasts about two weeks. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.50.

BLACK SEEDED TENNIS BALL. A variety very similar to the May King, and by our tests practically as valuable. It is a few days earlier, and with us lasted a few days longer than May King, but the latter had a trifle larger proportion of fine heads. The leaf edges are plain, the head bleaches to a beautiful cream color. This variety is also well recommended for forcing. Pkt., 5c; Oz., 15c; ¼ lb, 50c; lb, $1.50.

LOOSE HEAD VARIETIES

BIG BOSTON. (See illustration.) A variety very successfully grown in the South for shipment north in the winter. It heads up in cool weather better than any other variety, and grown for this purpose is excellent for market garden trade. In our tests this was one of the last varieties to reach maturity. It stood heat and drought well, and finally made a large, attractive, loose head, moderately crisp, with quite a large percentage of green leaves not bleached. Edges of leaves rather plain. With us it staid in its prime for ten days. Our stock is an extra select strain of this variety. Pkt., 5c; Oz., 15c; ¼ lb, 35c; lb, $1.25.

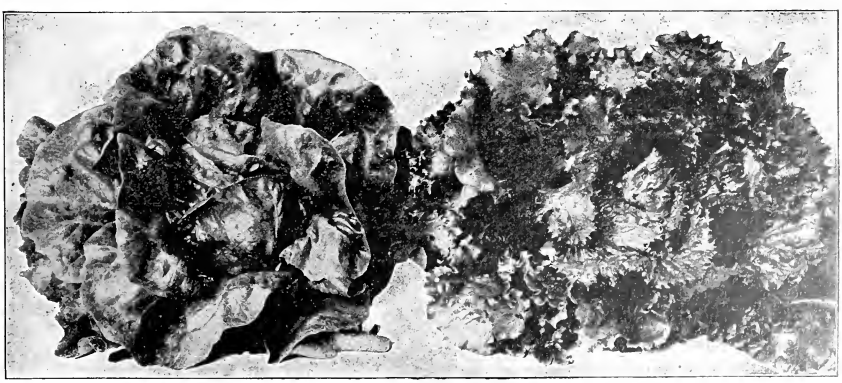
CALIFORNIA CREAM BUTTER. A variety similar to Big Boston, and used for like purpose, shipping north in cool weather, for which it is excellent. It is a dark green color, slow about coming to prime, but in our grounds staid good for ten or twelve days. Edges are plain, leaves darker green than Big Boston. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.50.

DEACON. One of the so-called "butter" varieties, highly recommended on account of their flavor. Rather late in reaching maturity, a summer variety. In our trial grounds, it did not stand heat and drought quite so well as some other varieties. Edges of leaves are plain, color dark green. With us it stayed in its prime about ten days. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.50.

DENVER MARKET. (See illustration.) One of the most attractive and best varieties in the loose head class. Early, very attractive, light green in color, the inner leaves bleached and crisp. Edges of the leaves somewhat frilled. In our trial grounds it staid good much longer than most other sorts of lettuce. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.50. (Very scarce.)

We have grown this lettuce both for home use and market for fifteen years and it has always been one of our favorites. It is splendidly adapted for both purposes. (Very short crop.)

GRAND RAPIDS. This is the great greenhouse or hotbed variety. The leaves are beautifully frilled, decidedly crisp and tender, with a large percentage of bleached surface. It is not liable to rot in the greenhouse, and in our trial grounds remained in its prime between two and three weeks. It is splendidly adapted to growth outdoors as well as in the greenhouse. Our stock is grown by an expert, and great care taken with it. Pkt., 5c; Oz.; 15c; ¼ lb, 50c; lb, $1.75.



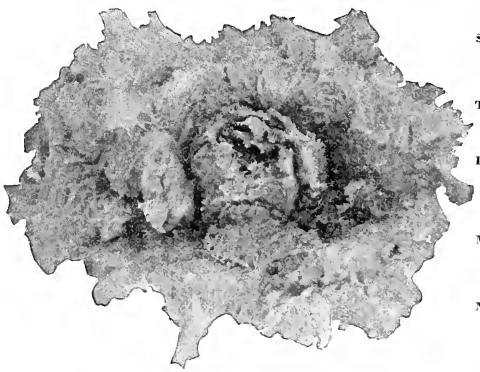
DEACON. PRIZEHEAD.

LOOSE LEAF VARIETIES

HANSON IMPROVED. A variety used more for outdoor work than for greenhouse, but when grown outdoors it compares very favorably with Grand Rapids, is similar to it in appearance, and from our trial ground experience we would as soon have one as the other for outdoor use. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.50.

HANSON IMPROVED.

HUBBARD MARKET. A plain dark green leaved, summer variety, late about reaching maturity, with us staid in its prime about ten days. With us it did not stand the heat and drought well, but under more favorable conditions it makes an excellent variety. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.50.



SIMPSON EARLY CURLED.

ICEBERG. An outdoor variety, early in maturing, somewhat similar in appearance to Grand Rapids. The leaves are frilled, although not so much so as Grand Rapids. It has quite a large percentage of crisp white leaves. With us it staid in its prime nearly three weeks. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.50.

MAMMOTH BLACK SEEDED BUTTER. It is liked by market gardeners on account of its standing frost in spring, enabling them to plant very early. We found it very similar to California Cream Butter or Hubbard Market. It is early in maturing, and with us did not stand heat and drought as well as some other varieties. Edges of the leaves smooth, color dark green. Pkt., 5c; Oz., 15c; ¼ lb, 35c; lb, $1.25.

There are 300 different varieties of lettuce listed in the catalogues of American seed men. We believe, without a shadow of a doubt, that the varieties we have listed comprise practically all that anyone needs to grow, and we might make this more emphatic by stating that we believe we are serving our customers just as well by eliminating about 275, offering only the cream of the entire lot, as we would by offering a larger assortment. We are constantly testing out new sorts, and if anything new shows superiority, we will unquestionably offer it.

SIMPSON BLACK SEEDED. An all round good variety, under glass, in cold frame, or outdoors. Early, crisp and tender; very similar to Simpson Early Curled. Pkt., 5c; Oz., 15c; ¼ lb, 35c; lb, $1.25.

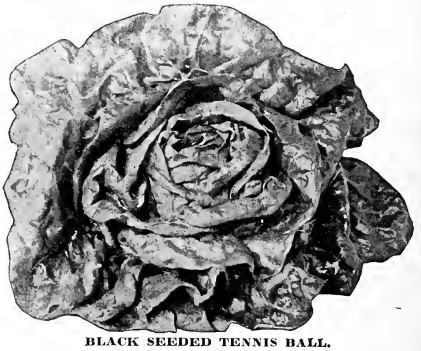
SIMPSON EARLY CURLED. An open leaf variety, yellowish green in color, early, well adapted to family use, as it may be planted thickly and the whole plant eaten when quite young. The entire plant is crisp, decidedly early, and may be used for a long time. Pkt., 5c; Oz., 15c; ¼ lb, 35c; lb, $1.25.

TENNIS BALL WHITE SEEDED OR BOSTON MARKET. A forcing variety similar in appearance to Black Seeded Tennis Ball. In our trial grounds outdoors it did not stand heat and drought at all well. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 90c.

PRIZE HEAD. A large, loose leaf variety, beautifully tinged with brownish red. The edges are decidedly frilled, and the entire plant very attractive The center contains a large proportion of white leaf. It is one of the earliest varieties to reach its prime, and with us lasted at least two weeks. Pkt., 5c; Oz., 15c; ¼ lb, 50c; lb. $1.50.

MAXIMUM OR IMMENSITY. A variety similar to Hubbard Market, but stood heat and dry weather somewhat better. One of the very largest varieties we know of. The edges of the leaves are plain, and color dark green. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.00.

NEW YORK OR WONDERFUL. A favorite with market gardeners around New York City. The outside leaves very dark green with rather fancy edges, the heads somewhat conical, loose and large. It is rather early, and in our trial grounds lasted about ten days. Pkt., 5c; Oz., 15c; ¼ lb, 50c; lb, $1.50.



BLACK SEEDED TENNIS BALL.

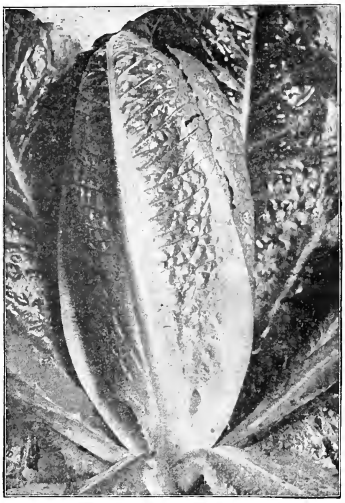
COS LETTUCE

In Europe Cos Lettuce is very extensively grown, some European seedmen offering nearly as large an assortment of varieties as they do of the ordinary Lettuce. The plant is decidedly plain in appearance. The heads are oblong, the leaves long and spoon shaped. It cannot be eaten when young, as most ordinary Lettuce can, but it is necessary to wait for it to head. When the heads form they are self-blanching, decidedly crisp, white, and very tender. The heads become quite large, and will weigh probably two pounds, or over, when ready to use. Most of the ordinary varieties of Lettuce in our trial grounds this summer shot to seed in about ten days to two weeks after reaching their prime. The Cos Lettuce staid good for over a month. It was extremely slow in shooting to seed, and remained tender and sweet during all this time. Our neighbors who were not accustomed to this variety were inclined to scoff at it, on account of its plain appearance, until we gave them a head to try, and they promptly came back, stating that it was the best Lettuce of any sort that they had ever tasted.

We offer two varieties, Express and White Paris. Our tests this year show a very modest amount of difference between these two.

EXPRESS. Pkt., 5c; Oz., 15c; ¼ lb, 50c; lb, $1.50.

WHITE PARIS. Pkt., 5c; Oz., 15c; ¼ lb, 50c; lb, $1.50.



WHITE PARIS COS.

Zucker Melon MUSKMELONS Melon Muscatel

A fertile, moderately loose soil that is not cold should be selected. Plant after all danger of frost is over and the ground warm and dry, in hills four to six feet apart each way. Cultivate until the vines cover the ground. For the striped beetle we use pulverized tobacco and turpentine.

You can get ahead of the bugs, obtain earlier melons, and get top prices, by starting them in little pots in frames, transplanting when second or third leaves are formed.

ACME OR BALTIMORE. Medium sized, oval or long oval, slightly pointed and slightly ribbed, closely netted. Flesh thick, green and well flavored; one of the desirable green-fleshed, medium size melons. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 85c.

BURRELL'S GEM. An orange fleshed variety, adapted to shipping. Oblong, smoothly round at ends, closely netted, slightly ribbed; fruits about 6 in. long; 4 in. deep; flesh salmon colored; rind thin but tough. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, $1.00.

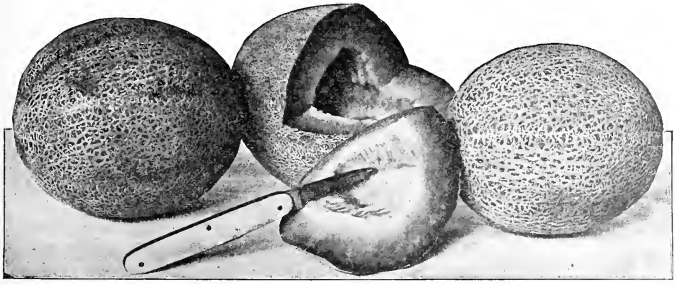
EXTRA EARLY GREEN CITRON. An early variety, good sized, nearly round, hardy and productive, skin green, becoming yellowish at maturity. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.00.

EMERALD GEM. An early variety, medium sized, nearly round, salmon colored flesh, of excellent flavor. A good variety for home use. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.25.

BANANA. Fruit 18 to 21 in. long; cucumber shape with delicious aroma. Flesh yellow, blending from bright green to salmon. Pkt., 10c; Oz., 15c; ¼ lb, 50c.

CHAMPION MARKET. An early variety, similar to the netted gem, but larger, prolific; a good shipper; green fleshed. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, $1.00.

HACKENSACK OR TURK'S CAP. Very large, green fleshed, fruits nearly round or flattened, ribs large, skin heavily netted. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.00.

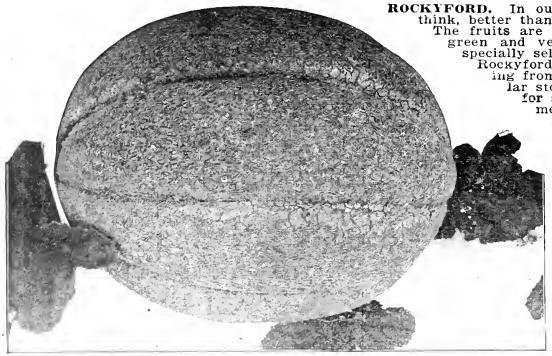


ROCKYFORD.

EXTRA EARLY HACKENSACK. Two weeks earlier than the well-known Hackensack. Medium to large size, nearly round or flattened; skin green tinged with yellow at maturity; flesh green and trifle coarse, but of good flavor. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, $1.00.

HOODOO. A vigorous variety that resists rust better than many other sorts, productive, the fruits varying in shape but averaging nearly round like Netted Gem; netting dense and fine; rind thin but very firm; an excellent shipping variety. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.

MUSK MELONS—Continued



ROCKYFORD. In our trial grounds this variety suits us, we think, better than any other, the quality being simply ideal. The fruits are oval, slightly ribbed, densely netted; flesh green and very thick. We offer two grades, one of specially selected stock, grown for us by an expert in Rockyford, Colorado; this carefully selected seed coming from the choicest melons only, while the regular stock is saved from an entire field set aside for seed production. Price—Selected from best melons. Pkt., 10c; Oz., 20c; ¼ lb, 50c; lb, $1.75. Regular Stock, Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, $1.00.

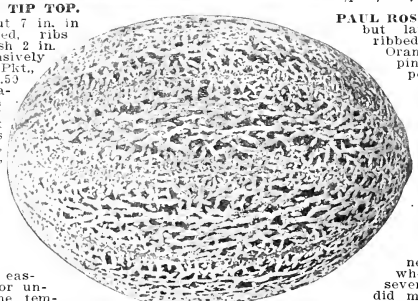
GOLD LINED ROCKYFORD. This variety seems to represent the very acme of perfection, being the most highly developed strain of Rockyford. The shape is slightly oval, heavily netted over entire surface; flesh thick, fine grained and sweet. The color is green with a gold margin next to the seed cavity. We offer two grades in this melon as in the Rockyford, our extra select being saved from the best melons only; the regular stock being saved from entire field set aside for seed production. Price—Selected from Best Melons, Pkt., 10c; Oz., 20c; ¼ lb, 50c; lb, $1.75. Regular Stock, Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.25.

JENNY LIND. A splendid, very early, small variety, unsurpassed in quality, green flesh; a good shipper. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, $1.00.

TIP TOP.

NUTMEG. Fruit round, about 7 in. in diameter, slightly flattened, ribs large, broad and heavy, flesh 2 in. thick, light green, extensively grown around Montreal. Pkt., 5c; Oz., 15c; ¼ lb, 45c; lb, $1.50.

OSAGE. A salmon fleshed variety that does well on either heavy soil or on sandy ground. Well netted, dark skin, two or three times as large as Rockyford. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.25.



BURRELL'S GEM.

PAUL ROSE. A variety like Netted Gem but larger. Fruits oval, slightly ribbed, densely netted, flesh thick. Orange color. An excellent shipping variety of handsome appearance and good quality. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, $1.00.

LONG ISLAND BEAUTY. A special strain of Hackensack, as early as Hackensack but better quality. Deeply ribbed, heavily netted; flesh clear green. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.00.

TIP TOP. A yellow fleshed variety of large size and excellent quality. The skin nearly smooth and free from netting, becoming light green when ripening. Fruits six to seven inches in diameter. A splendid market variety. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.25.

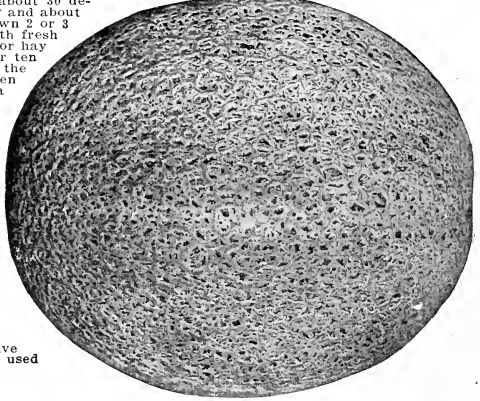
MUSHROOM SPAWN

Mushrooms may be very easily grown in sheds, cellars, or under greenhouse benches. The temperature should be about 60 degrees.

In making the beds the indispensable ingredient is fresh horse manure. It should not contain too much straw or litter and should be mixed with a fourth or fifth part of good garden soil. Make the beds with this mixture, removing all projecting straws. The bed should be made 3 or 4 feet wide and 8 in. deep. Make in layers, pounding each layer down with the back of a spade. When the temperature of the bed has subsided to about 30 degrees, make holes in the bed one foot apart each way and about an inch deep. Place in these holes pieces of the spawn 2 or 3 in. in diameter. Fill up the holes, cover the beds with fresh soil to the depth of 2 in. and place a layer of straw or hay 3 or 4 in. in thickness over all. In about a week or ten days the spawn should have thoroughly permeated the bed. Do not let the bed get too dry. Examine it often and give light waterings sparingly, using water at a temperature of 100 degrees. In from six weeks to two months the bed should begin to bear and should continue bearing for 2 or 3 months. In gathering Mushrooms be careful to fill the cavities with the soil which covers the bed.

French Mushroom Spawn should be kept in a warm, moist atmosphere for a few days before planting and should be sprinkled with water before putting into the bed.

	Per brick	10 bricks	100 bricks
American Spawn. In bricks..	$0.20	$1.80	$16.00
English Spawn. In bricks...	.15	1.30	12.00
French Spawn. In two lb boxes. Per 2 lb box, 60c			



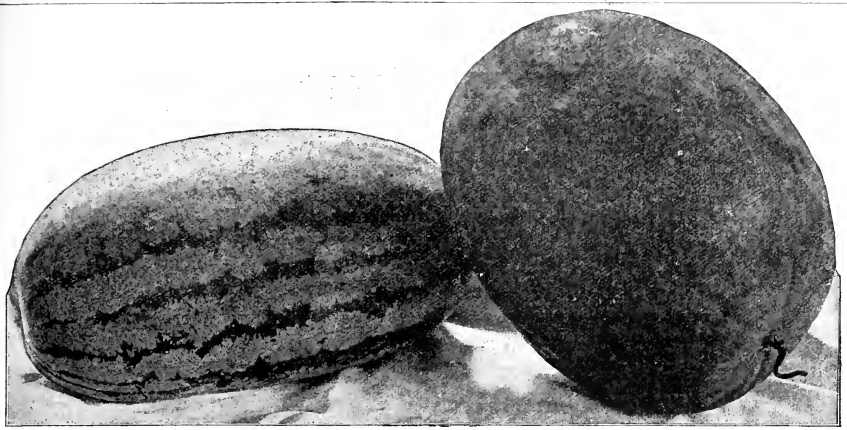
GOLD LINED ROCKYFORD.

Nasturtium NASTURTIUM Maraneula

Sow as soon as all danger of frost is past, in drills about an inch deep. The tall kinds should have fences or poles upon which to climb. The seeds are used in flavoring pickles or as a substitute for capers.

TALL MIXED—Pkt., 5c; Oz., 10c.

DWARF MIXED—Pkt., 5c; Oz., 10c.



SOUTHERN RATTLESNAKE. EARLY FORDHOOK.

Wassermelone WATERMELON Sandia

Best results are secured by planting on decidedly rich soil, making hills about eight feet apart, the hills being especially fertilized. Do not plant the seed until the ground is warm and dry. Put ten or twelve seeds to a hill and when the plants are well established, thin to two or three of the strongest. In cultivating, be very careful as the vines are sensitive about being moved or stepped upon.

ALABAMA SWEET. A large, long melon, rather dark green, with dark irregular striping, rind thin but very tough, flesh bright red with white seeds. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

COLE'S EARLY. A hardy, early variety, adapted to the North, medium sized, nearly round; the rind green striped with lighter shades. A poor shipper but good for home use. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

CUBAN QUEEN. A large variety, the skin striped in dark and light green; rind thin but tough enough for shipping, becomes very large and a heavy cropper. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

FLORIDA FAVORITE. A large melon, a week earlier than Kolb's Gem. Skin dark green, evenly striped with deeper shade; shape oblong. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

GREY MONARCH. A very large melon, oblong shape, skin mottled grey, flesh crimson and sweet. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

HALBERT HONEY. We find this one of the very sweetest and best varieties of watermelon for home use. Fruit about 18 or 20 in. long, skin dark green, flesh crimson, of excellent quality, with thin rind. Well adapted for selling in nearby markets. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

ICE CREAM OR PEERLESS. One of the very best varieties for home use, but not well adapted to shipping. Oval to long in shape, bright green, finely veined and mottled, medium sized. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

DARK ICING. Fruit medium sized, nearly round, dark green, mottled with lighter shade, flesh bright red, sweet, excellent quality. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

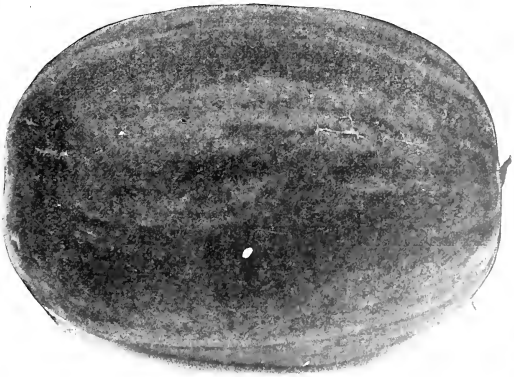
ICEBERG. Similar to Kolb's Gem but larger, extensively grown in the South for shipping north, for which purpose it is well adapted. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

KLECKLEY'S SWEET. One of the very best varieties for home use, not adapted to shipping far. Fruits 18 to 20 inches long, 10 or 12 inches in diameter. In flavor equal to any. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

PRESERVING CITRON—RED SEEDED. Medium sized and round, used only for preserves or pickles, hardy and very productive, an excellent variety for this purpose. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

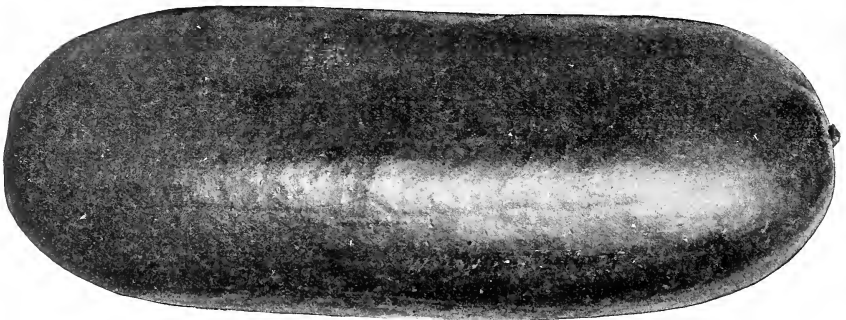
DIXIE. A large striped variety, oblong, from 20 inches to 2 feet in length, skin dark green with stripes of lighter shade, excellent for shipping or table use. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

EARLY FORDHOOK. A very early variety, ripening nearly with Cole's Early. Good sized, round, medium green in color, flesh bright red, a good shipper. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.



HALBERT HONEY.

WATERMELON—Continued



TOM WATSON.

KOLB'S GEM. One of the most improved shipping varieties grown, melons large, oval, blocky form. Skin handsomely marked in stripes of light and dark green. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

GYPSY OR GEORGIA RATTLESNAKE. An old standard variety, very large, long, and distinctly striped. Very popular in the South; stands shipping well. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

TOM WATSON. One of the very finest melons yet produced, excellent either for home use or for shipping. One of the largest melons grown, 18 to 24 in. long, 10 to 12 in. in diameter. Will weigh 50 to 60 pounds. The quality is of the very best and its tough rind and excellent shipping qualities make it one of the most valuable sorts grown. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

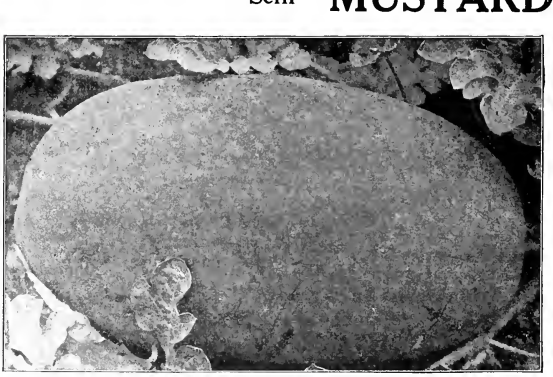
PHINNEY. One of the earliest varieties; of good size, productive, oblong, rind mottled in color, excellent quality. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

SWEETHEART. A large, handsome melon, a good shipper. Skin very pale green with distinctly netted lines of slightly darker shade. Fruit remains in condition for use longer than most sorts. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

MOUNTAIN SWEET. An old standard variety, early, excellent for Northern use, rather long and late. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

TRIUMPH. A Southern variety used largely for shipping. One of the largest melons grown. Skin bluish green, with dark red flesh and good quality. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

Senf MUSTARD Mostaza



KLECKLEY'S SWEET.

BLACK OR BROWN. This variety forms the mustard of commerce. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 40c.

CHINESE BROAD-LEAVED. Leaves very large, twice the size of ordinary white mustard. Very easily prepared for table; flavor sweet and pungent. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 65c.

SOUTHERN GIANT CURLED. Leaves large, much crimped and frilled at edges, plant large, much grown in the South. Leaves are boiled like Spinach. More delicate flavor than Chinese Broad-Leaved. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

WHITE LONDON. Grows very rapidly. Leaves comparatively small and smooth, deeply cut, medium dark green color. Leaves when young are mild and tender. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 40c.

OKRA

This vegetable is highly esteemed in the South for soups, stews, etc., the young seed pods being used for that purpose. Plant on good, warm, rich ground after danger of frost is past and the ground is warm, in rows about 2½ feet apart, the plants being one foot apart in the row. The pods are best used when one to three inches long.

PERKIN'S MAMMOTH. Plants about three feet tall; pods four to five inches long; produced in great quantity, handsome appearance, the pods of green color, tender and of good quality. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

WHITE VELVET. Produces larger pods than any other, the pods round and smooth, while other varieties are ridged, corrugated or square. Yields heavily, stays tender until nearly full size. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

Zweibel ONION Cebolla

Sow the seed as early in the spring as possible whenever the ground will do to work, even if the weather is cold. This is very important, as the plants must be started before dry weather starts in. Have the soil very thoroughly pulverized and a perfect seed bed. Sow four to five pounds per acre in drills one foot apart and about one-fourth inch deep. When the plants are four inches high, thin out to stand of three or four inches apart in the rows. Keep well hoed and free from weeds. The best shaped and colored bulbs are produced where large quantities of well rotted manure are used. If this is not available, large amounts of high grade commercial fertilizer is required. Wood ashes are beneficial and make the onions keep better.

EXTRA EARLY RED. A medium sized, uniform shaped onion, earlier than Large Red Wethersfield, yields well and a good keeper. Pkt., 5c; Oz., 20c; ¼ lb, 40c; lb, $1.25.

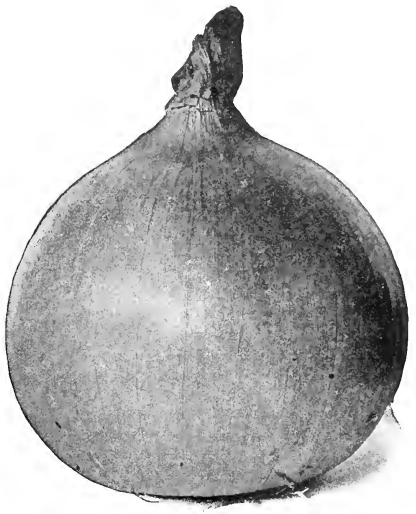
YELLOW DUTCH OR STRASBURG. An excellent variety for sets, quite early, medium sized, mild, a splendid keeper. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.25.

OHIO YELLOW GLOBE. A very handsome variety and one of the best yielders, ripens early and all at once, necks very small, a splendid keeper. We think it impossible to improve on our stock of this variety. Pkt., 5c; Oz., 20c; ¼ lb, 60c; lb, $1.75.

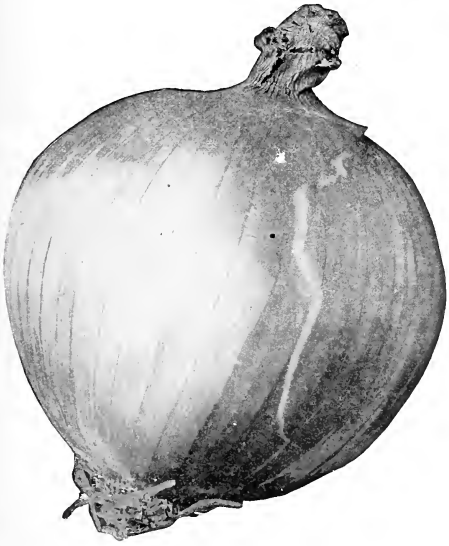
AUSTRALIAN BROWN. One of the earliest varieties, medium size, solid, one of the very best keepers. It is nearly spherical, slightly flattened, reddish brown in color, rather strong flavored. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.00.

LARGE RED WETHERSFIELD. A very popular standard variety, one of the best for yields as well as for keeping, well flattened but thick through, large and heavy, the skin purplish red, smooth and glossy. It is excellent to grow for late winter markets, does well on poor soils and in the South, is not well adapted to muck land. We think that our stock can not be excelled. Pkt., 5c; Oz., 20c; ¼ lb, 60c; lb, $1.75.

SOUTHPORT LARGE RED GLOBE. Usually called the handsomest of the red onions. Measures 2½ to 3 inches in diameter, uniform and extra dark color, with thin necks, a splendid market variety and a good keeper. Eastern grown seed, Pkt., 10c; Oz. 30c; ¼ lb, 90c; lb, $3.50. Western grown seed, Pkt., 5c; Oz., 20c; ¼ lb, 60c; lb, $2.00.



OHIO YELLOW GLOBE.



PRIZE TAKER.

SOUTHPORT YELLOW GLOBE. A rather late main crop variety, more perfectly globe shaped than Globe Danvers, skin pale straw color, flesh creamy white, fine grained and of mild and excellent flavor; a heavy cropper and excellent keeper. Eastern grown seed, Pkt., 10c; Oz., 30c; ¼ lb, 90c; lb, $3.50. Western grown seed, Pkt., 5c; Oz., 20c; ¼ lb, 50c; lb, $1.75.

SOUTHPORT LARGE WHITE GLOBE. A very attractive onion that usually commands the highest price, true globe shape, two to two and one-half inches in diameter, flesh true white, of mild flavor, too late to grow north of Massachusetts. Eastern grown seed, Pkt., 10c; Oz., 30c; ¼ lb, 90c; lb, $3.50. Western grown seed, Pkt., 5c; Oz., 20c; ¼ lb, 50c; lb, $1.75.

WHITE PORTUGAL. Medium sized onion, very late, rather flat in shape, mild flavor. It is used for sets, for pickles, for early bunching or green onions, and as a large white onion for fall and early winter use. Our seed is French grown and cannot be excelled. Pkt., 5c; Oz., 20c; ¼ lb, 60c; lb, $2.00.

AILSA CRAIG. In our trial grounds this year this variety, even when subjected to very trying conditions, made the very best of yield, and of a fine quality. We consider it one of the most valuable varieties which we have. It is yellow, globe shaped, medium size, uniform, yet similar to the Ohio Yellow Globe, but a lighter yellow. Pkt., 5c; Oz., 20c; ¼ lb, 50c; lb, $1.75.

ONION—Continued

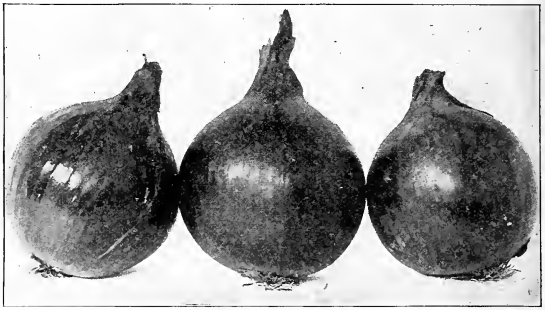
WHITE BARLETTA OR WHITE QUEEN. A very early, pure white, rather small, flat onion, one to two inches in diameter. Recommended as the best of all for small pickles, and the earliest ripening onion in cultivation. Pkt., 5c; Oz., 15c; ¼ lb, 60c; lb, $1.60.

YELLOW DANVERS. Productive, very extensively used for early or main crop, medium sized bulb, thick through but flattened, with coppery yellow skin, thick neck, cream colored flesh, mild and good flavor, a heavy yielder that ripens evenly and keeps well. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.25.

YELLOW GLOBE DANVERS. One of the most extensively used main crop varieties, a standard for winter use, almost true globe shape, beautiful yellow skin, pure white flesh, good size and thin neck, matures slightly earlier than Southport Yellow Globe. The crop ripens uniformly and keeps well. Our stocks are as carefully grown and cared for as can be, and will give satisfaction. Pkt., 5c; Oz., 20c; ¼ lb, 50c; lb, $1.75.

PRIZE TAKER. An excellent late variety, nearly globular in form. Under proper conditions reaches great size. If started in greenhouse it may grow twelve to fifteen inches in circumference. Flesh pure white, fine grained and delicate in flavor. If properly ripened and stored it is excellent for fall and early winter, but will not keep for late winter. Pkt., 5c; Oz., 20c; ¼ lb, 50c; lb, $1.75.

CHESTER'S GLOBE CANARY. A new onion of great merit, globe shaped, light saffron yellow or canary in color, flesh fine grained, pure white, bulbs very hard and are great keepers. Some keep until well into spring. Shape ideal for a fine market onion. Pkt., 20c; Oz., 50c; ¼ lb, $1.75; lb, $6.00.



SOUTHPORT RED GLOBE.

CHESTER'S FLAT CANARY. A new onion that the introducer, an onion set merchant, thinks will supplant all other kinds of onions for sets. It is also of saffron yellow or canary yellow color, early, with well ripening qualities; every plant making a marketable bulb; forms good sized hardy bulbs of great keeping qualities. Pkt., 20c; Oz., 50c; ¼ lb, $1.75; lb, $6.00.

ONION SETS

It is impossible, as this catalogue is written, to fix prices for sets. We follow the market and will fill orders at market prices. In bushel, peck and one-half peck prices, the buyers pays the express or freight; at pint and quart prices, we pay the postage and send the sets by mail.

	Mail Postpaid.		Express not Prepaid.		
	Pt.	Qt.	½ Pk.	Pk.	Bu., (28 lb)
Canary Flat	20c	35c	60c	$1.00	$3.75
Red	15c	30c	50c	.80	3.00
White	15c	30c	50c	$0.90	$3.25
Yellow	15c	30c	50c	.80	3.00

SOUTHPORT WHITE GLOBE.

Our Onion Seed is grown for us by the world's greatest experts. From each one we buy his choicest quality, and the stocks or varieties in which he specializes.

YELLOW GLOBE DANVERS.

Erbsen PEAS Chicacos o Guisantes

Peas do well on almost any warm, fertile soil. Too much manure, very rich or wet mucky soil should be avoided, as they cause too rank a growth of vine and a rather small proportion of pods. The quickest results are obtained by planting the seed only an inch deep, but for June and late crop, best results are obtained by planting in trenches six or eight inches deep; covering an inch at least, and later, after the vines have grown, say six inches high, filling the trench on up. All varieties should, in our opinion, be sown early, as they thrive best in cool weather. A succession can easily be made by choosing early, medium and late varieties to sow. Our experience is that the tall varieties yield more heavily and are more certain to succeed under unfavorable conditions than the dwarf varieties.

Wrinkled sorts are designated by asterisk.

ALDERMAN.

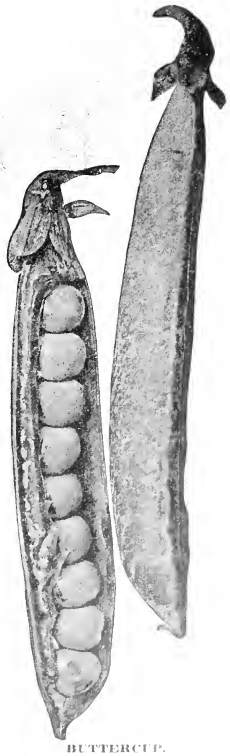
***ALDERMAN.** A medium sized variety with rather large vines, but with us not requiring support. The pods are large, fine appearing, with good sized peas. Under very trying conditions with us it did not yield quite so well as some other sorts. The quality is excellent. Pkt., 10c; Pt., 30c; Qt., 50c; ½ Pk., $1.10; Pk., $1.75; Bu., $7.00.

LITTLE MARVEL.

***BUTTERCUP.** A new medium early pea, coming between Premium Gem and Telephone. Hardy with long, well filled pods; a good yielder. Splendid sort for market gardeners. Pkt., 10c; Pt., 35c; Qt., 60c; ½ Pk., $1.25; Pk., $2.35; Bu., $9.

***AMERICAN WONDER.** One of the very earliest wrinkled peas. Grows 10 to 12 in. high; yields reasonably well. A variety we can recommend for very early growing. Pkt., 10c; Pt., 30c; Qt., 50c; ½ Pk., $1.10; Pk., $2.00; Bu., $7.50.

***LITTLE MARVEL.** One of the very earliest peas, maturing with Nott's Excelsior, American Wonder and Premium Gem. Wrinkled, extremely sweet, very nice quality, decidedly productive and stands heat and drouth well. We consider this an extremely valuable variety, one of the very best. Pkt., 10c; Pt., 30c; Qt., 50c; ½ Pk., $1.25; Pk., $2.35; Bu., $9.



BUTTERCUP.

ALASKA. An invaluable smooth variety for market gardeners and canners. A blue pea that matures all at one picking. Rather heavy crop; the earliest of any pea we know of. Pkt., 10c; Pt., 30c; Qt., 45c; ½ Pk., $1.10; Pk., $1.60; Bu., $6.25.

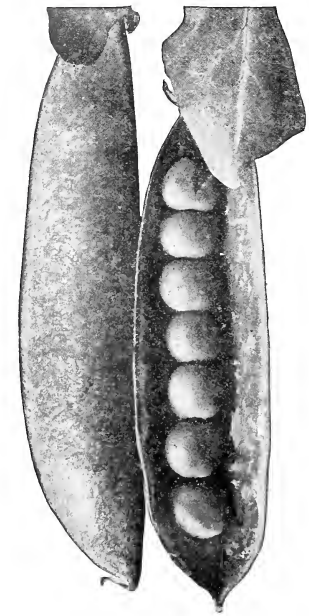
***ADVANCER.** A few days later than American Wonder. Vines a trifle larger. In our trial grounds this year this pea stood heat and drouth better than any of the earlier sorts, with the possible exception of Little Marvel, which also did well; a good yielder of good quality. Pkt., 10c; Pt., 25c; Qt., 45c; ½ Pk., $1.00; Pk., $1.75; Bu., $6.50.

***EVERBEARING.** The vines are rather large but do not require artificial support. A mid-season, late variety, well described by its name. If pods are gathered from it, it will continue to bear for two or three weeks and would be desirable for small gardens on this account. The peas are large and of good quality. Pkt., 10c; Pt., 30c; Qt., 50c; ½ Pk., $1.15; Pk., $2.20; Bu., $7.50.

***CHAMPION OF ENGLAND. (Tall.)** One of the best tall-growing, late varieties. Grows medium high for a tall variety, with medium sized pods, but a good yielder and of excellent quality. Pkt., 10c; Pt., 30c; Qt., 50c; ½ Pk., $1.10; Pk., $1.75; Bu., $7.

***DWARF GREY SUGAR.** A genuine edible podded variety; the pods being brittle are easily broken up and cooked. We like this sort on our own table, although eaten pods and all, they are not quite so good as the best standard shelled peas. This variety grows about 18 inches tall, with medium pods. Decidedly prolific. Pkt., 10c; Pt., 30c; Qt., 50c; ½ Pk., $1.25; Pk., $2.25; Bu., $8.00.

PEAS—Continued



GRADUS.

*GRADUS. An extra early wrinkled pea of splendid quality, and a heavy producer; vines about 2½ in.; pods large; peas extremely large, and closely packed in the pod; the quality all that could be asked for. This is a standard sort and one that is difficult to improve on. Pkt., 10c; Pt., 35c; Qt., 60c; ½ Pk., $1.25; Pk., $2.35; Bu., $9.00.

TELEGRAPH. A strikingly handsome, tall growing, large pea; on the Telephone type. The pods are very handsome, large and well-filled with choice peas. It yields well and stands heat and drouth admirably. Pkt., 10c;

*NOTT'S EXCELSIOR. Wrinkled. One of the standard dwarf early sorts; very nearly as early as Alaska, and being wrinkled, of much better quality than Alaska. The pods are medium sized peas medium or larger, and for such an early sort, of very good quality. Pkt., 10c; Pt., 25c; Qt., 45c; ½ Pk., $1.00; Pk., $1.75; Bu., $6.50.

*PREMIUM GEM. Wrinkled. Vines 12 or 15 in. in height; pods 2½ to 3 in. long; about three days later than American Wonder. An excellent pea either for market gardeners or home use. Pkt., 10c; Pt., 30c; Qt., 50c; ½ Pk., $1.15; Pk., $1.75; Bu., $6.75.

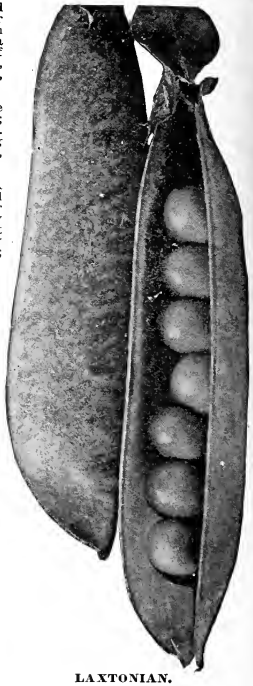
*STRATAGEM OR IMPROVED STRATAGEM. Wrinkled. A mid-season variety with strong vines about 18 in. high; pods large with numerous peas. They yield with us, under adverse conditions, just moderately well. Pkt., 10c; Pt., 30c; Qt., 50c; ½ Pk., $1.15; Pk., $1.75; Bu., $7.50.

*DWARF CHAMPION. A medium sized variety adapted to main crop. In our trial grounds it stood heat and drouth better than many other sorts and made a better yield. It resembles Champion of England, except in size of vine. Pkt., 10c; Pt., 30c; Qt., 50c; ½ Pk., $1.10; Pk., $1.75; Bu., $7.00.

*TELEPHONE. Wrinkled. A rather late sort; tall, growing, 3½ to 4 ft. in height; has very large pods and large fine peas. It continues in bearing for quite a long time. Pkt., 10c; Pt., 30c; Qt., 50c; ½ Pk., $1.15; Pk., $1.85; Bu., $7.00.

*HORSFORD'S MARKET GARDEN. A medium size, main crop variety of good appearance and good quality. Under favorable conditions makes a heavy crop, but in our trial grounds did not stand heat and drouth as well as many other sorts. Pkt., 10c; Pt., 30c; Qt., 50c; ½ Pk., $1.25; Pk., $2.25; Bu., $8.00.

TELEPHONE.



LAXTONIAN.

*LAXTONIAN. A variety on the type of Gradus, maturing about the same time. The pods are very large and numerous; the peas large and attractive. We would place this pea in a similar class to Gradus in every way. Pkt., 10c; Pt., 35c; Qt., 65c; ½ Pk., $1.65; Pk., $2.75; Bu., $10.00.

*THOMAS LAXTON. Wrinkled. A medium sized variety of the Gradus type, which it rather closely resembles, the peas ripening a few days later than Gradus. The vines are strong, pods large and fine, with peas of excellent size and quality. Pkt., 10c; Pt., 35c; Qt., 60c; ½ Pk., $1.35; Pk., $2.50; Bu., $9.50.

*DUKE OF ALBANY. In our trial grounds this was the most striking of the tall growing, late peas, the pods being very large and attractive and the vines yielding very heavily. It is on the Telephone order and of the best quality. It stood drouth very well, one of the best in this respect, and one of the finest flavors. Pkt., 10c; Pt., 30c; Qt., 50c; ½ Pk., $1.10; Pk., $1.75; Bu., $7.00.

PEAS—Continued

DUKE OF ALBANY.

***YORKSHIRE HERO.** Wrinkled. A second early variety, with strong plants similar to Everbearing. With us it stands drouth and heat admirably and makes a satisfactory yield. Pods and peas medium size and good quality. Pkt., 10c; Pt., 25c; Qt., 45c; ½ Pk., 85c; Pk., $1.65; Bu., $6.50.

MAMMOTH PODDED SUGAR. This sort differs materially from the Dwarf Grey Sugar; the vines being larger; the pods much broader; a larger pea in every way. The quality is about the same as the Dwarf Grey Sugar. In our trial grounds each of these stood heat and drouth moderately well. Pkt., 10c; Pt., 30c; Qt., 50c; ½ Pk., $1.20; Pk., $2.25; Bu., $8.50.

WHITE MARROWFAT. A late and tall growing variety, yielding very well for us, and of excellent quality. The pods are medium to large and uniform. It stands heat and drouth admirably. Pkt., 10c; Pt., 25c; Qt., 45c; ½ Pk., 75c; Pk., $1.10; Bu., $4.50.

MAMMOTH SUGAR.

Pfeffer PEPPER Pimiento

The culture is the same as for Egg Plant, and plants require as much heat to perfect them. Do not plant hot varieties and Mangoes close together.

CAYENNE LONG RED. Bright red, slender pods, 2½ to 3 inches long, very hot. A standard variety. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ½ Lb., 75c; Lb., $2.25.

RED CHERRY. A second early sort, yielding abundantly of round fruit three-fourths inch in diameter, very hot. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ Lb., 75c.

CHINESE GIANT. One of the largest of the sweet peppers. Usually from 2 to 4½ inches deep and nearly as thick as deep. With us this is rather late in ripening. The flavor is mild and excellent. Pkt., 10c; ½ Oz., 30c; Oz., 50c; ¼ Lb., $1.50; Lb., $5.00.

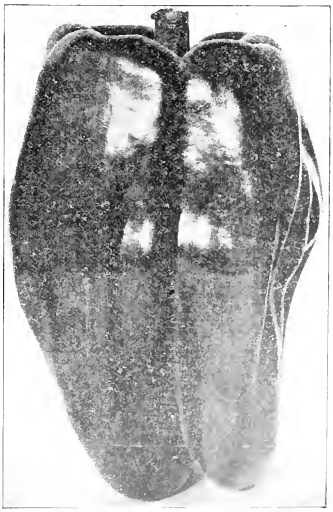
GOLDEN QUEEN. A mild variety, smooth, about 2x2½ inches, golden color, moderately early. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ Lb., 65c; Lb., $2.50.

NEAPOLITAN. A mild variety and the earliest one we have; fruit about four inches long, making good yield, crimson color, rather slender. Pkt., 10c; ½ Oz., 20c; Oz., 30c; ¼ Lb., 80c; Lb., $2.50.

PIMIENTO. A moderately late, mild variety of medium size, quite smooth, scarlet color, excellent flavor. Pkt., 5c; ½ Oz., 20c; Oz., 30c; ¼ Lb., $1.25; Lb., $4.00.

RED CHILI. A very hot variety used for making pepper sauce, quite similar to Red Cayenne, moderately late. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ Lb., 75c; Lb., $2.50.

RED CLUSTER. A moderately late, hot variety, with scarlet fruit crowded together in bunches or clusters at the top of each branch. Very productive. Pkt., 5c; ½ Oz., 15c; Oz., 25c.



NEAPOLITAN PEPPER.

PEPPER—Continued

CELESTIAL.

GOLDEN DAWN. A mild golden variety, very much like Golden Queen and matures at the same time, rather early, a good yielder. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 60c.

RUBY KING. One of the most popular varieties, quite large, ruby red in color, rather late, mild. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.50.

SWEET MOUNTAIN. A large variety of blunt shape, smooth, quite late, sweet and mild flavored. Pkt., 5c; ½ Oz., 10c; Oz., 20c; ¼ lb, 60c; lb, $2.00.

UPRIGHT SWEET SALAD. A moderately early, productive variety, the fruit growing upright; very mild, nice flavor, rich crimson color. Pkt., 10c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.50.

CELESTIAL. A very attractive appearing, hot variety fruit, upright, about 1½ inches in diameter and 1¾ inches long. In different stages of ripening the fruit will be nearly white, purple, yellow and orange, giving the plant an unusual and very ornamental appearance. Quite prolific in yield and quite early. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c.

LARGE BELL OR BULL NOSE. An early, mild, large red variety that may be eaten as a vegetable, medium sized, about three by four inches, color when ripe, bright crimson, good flavor. Pkt., 5c; ½ Oz., 10c; Oz., 20c; ¼ lb, 60c; lb, $2.00.

MIXED MANGOES. This mixture will give you all of the choicest varieties in all colors and plenty of them for the average sized family. Pkt., 10c; 3 Pkts., 25c.

HOLLOW CROWN. A large cropper of good flavor, excellent for general cultivation, requires deep soil. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

GUERNSEY. Roots somewhat longer than the preceding. Flesh fine grained, excellent quality. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

PARSLEY

This is used for flavoring soups and stews and for garnishing. Use rich soil, sow in drills one foot apart, covering the seed very lightly. It is slow in germinating, requiring two or three weeks. Thin plants to four inches apart.

FERN LEAVED. One of the most beautiful and artistic in form and color, fern-like, highly ornamental, ideal for garnishing. Pkt., 5c; Oz., 15c; ¼ lb, 35c; lb, $1.10.

HAMBURG OR THICK ROOTED. A plain leaved variety, forming a long, thick edible root. Much used for soups and stews. Pkt., 5c; Oz., 15c; ¼ lb, 35c; lb, $1.10.

MOSS CURLED. Very finely curled and crimped, bright green and very ornamental. Pkt., 5c; Oz., 15c; ¼ lb, 35c; lb, $1.10.

PLAIN. A very hardy variety, leaves flat and not curled. Much used for soups and stews. Pkt., 5c; Oz., 15c; ¼ lb, 35c; lb, $1.10.

MOSS CURLED.

PARSNIP

Parsnips are at their best when grown on deep, rich, sandy soil, but will make good roots on any soil which is deep, mellow and moderately fertile. The seed is sometimes slow in germinatng and should be sown as early as possible in drills 2½ ft. apart; cover to the depth to a half inch and press down the soil firmly over the seed, give frequent cultivation and thin the plants to six inches apart in the row.

BULL NOSE.

RHUBARB

This requires a deeply cultivated, rich soil. Seed should be sown early in the spring in rows one foot apart. The second year after planting, plants may be transplanted in the fall to permanent location planned for them. Set roots two feet apart each way and two feet deep. One ounce of seed produces 500 plants.

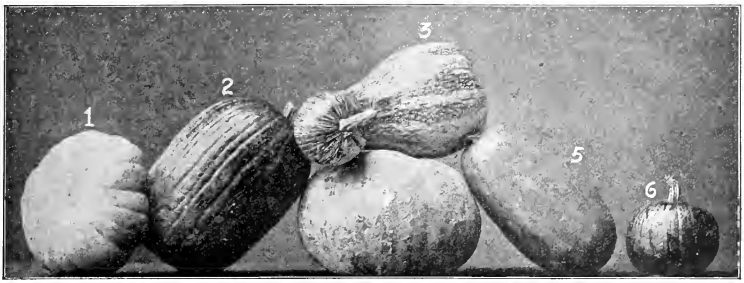
VICTORIA. The most popular variety, comes true from seed. Excellent for family use as well as market. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, $1.00.

TOBACCO

IMPROVED WHITE BURLEY. A standard sort of great merit. This strain is much superior to the regular White Burley. Our seed is grown by an expert and we take the greatest pains to have it of best possible quality. Pkt., 10c; ½ Oz., 20c; Oz., 25c; ¼ lb, 75c; lb, $2.25.

CONNECTICUT SEED LEAF. A hardy cigar variety, well adapted to the Middle and Southern States. Pkt., 5c; Oz., 25c; ¼ lb, 65c; lb, $2.25.

BIG HAVANA. The earliest cigar variety, a hybrid Havana or Cuban seed leaf. Pkt., 5c; Oz., 25c; ¼ lb, 65c; lb, $2.25.



1. LARGE CHEESE. 2. BIG TOM. 3. STRIPED CUSHAW. 4. KING OF THE MAMMOTHS. 5. GOLDEN OBLONG. 6. EARLY SUGAR.

Speise Kurbisse PUMPKIN Calabaza

Culture is similar to that of Squash, but they stand more punishment, do well in field corn, while Squashes do not succeed so well here. One ounce plants twenty-five hills; four pounds to the acre. In a small garden they may be planted near a low fence, allowing vines to climb over.

GREEN STRIPED CUSHAW. 18 to 24 inches long, 12 inches in diameter, green striped with crooked neck, excellent for pies, sells well on market. Not quite as rich and fine grained as some smaller varieties of pumpkins. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 90c.

GOLDEN OBLONG. Five to seven inches in diameter, 12 to 18 inches long, good for pies and a good keeper, orange color. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 80c.

JAPANESE PIE. Medium size, productive, ripens early, excellent for pies, flesh yellow. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 90c.

KING OF THE MAMMOTHS. A very early variety, usually growing two feet in diameter with salmon orange skin, thick yellow flesh. Greatly esteemed for exhibition purposes and sometimes used for pies. It is really less productive than several smaller varieties. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

BIG TOM OR IMPROVED LARGE SEED. This we have found to be the heaviest yielding stock pumpkin that we have ever grown. Size usually twelve to fifteen inches in length, about twelve inches in diameter, a deep orange color, may be used for pies, but is a coarse grained. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 40c.

LARGE SWEET CHEESE OR KENTUCKY FIELD. An excellent standard variety, cheese shaped, nearly all yellow, 12 to 18 inches in diameter, excellent for canning, a good keeper and good for pies. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 50c.

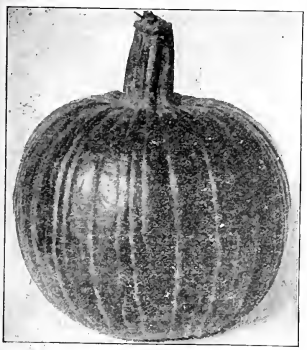
MAMMOTH TOURS. A very large variety, a trifle later than King of the Mammoth, about the same size and producing about the same, oblong, skin a mottled green. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 90c.

QUAKER PIE. A variety closely resembling Large Cheese, except in form, this being oblong instead of cheese shape, an excellent yielder. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

SWEET POTATO. A variety very well suited for pies, rather small, bell shaped, excellent quality. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

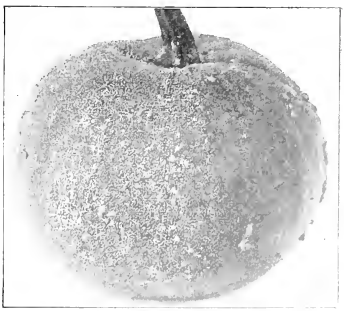
WINTER LUXURY. A round variety about eight inches in diameter, skin a trifle netted like musk-melon. Quality for pies is excellent. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

SWEET OR SUGAR. A famous New England variety, about ten inches in diameter, fine grained, sweet, excellent flavor, a good keeper. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 50c.

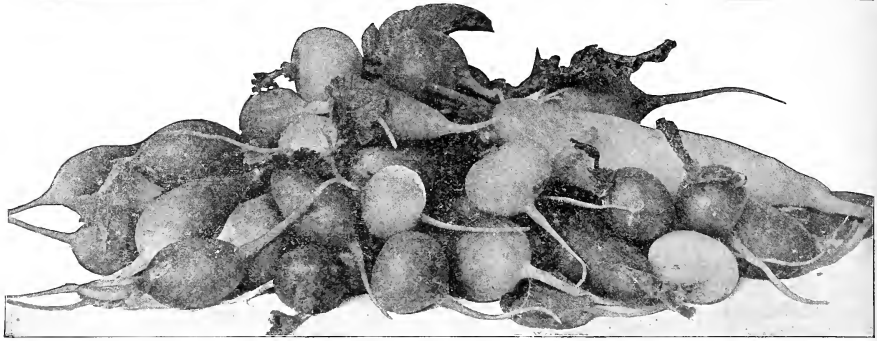


EARLY SUGAR.

We Prepay Postage or Express on All Vegetable and Flower Seeds, Ordered by Packet, Ounce or Quarter Pound. See Page 36 for Collections.



WINTER LUXURY.



MIXED RADISHES

Radies RADISH Rabanitos

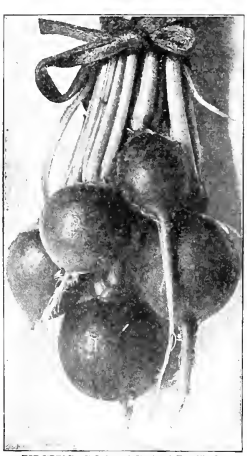
For early use, sow as soon as the ground can be worked in the spring, in drills six to ten inches apart, covering seed one-half inch deep. Thin to one inch apart in the row. A rich soil, not too heavy is preferred. The summer varieties may be seeded at the same time, if desired, and they will come on, making large, handsome radishes after the early varieties have become worthless. Winter varieties should not be sown until about August first.

Varieties marked with asterisk (*) are best suited to market gardeners.

***LONG WHITE ICICLE.** Probably the very finest of the early white varieties. Excellent for forcing or for outdoors. It is early, very attractive in appearance, does not become pithy until quite old, staying in its prime longer than any other early variety. Pkt., 5c; Oz., 10c; ¼ lb. 20c; lb. 65c.

CRIMSON GIANT. A round radish exceptionally large in size; excellent for marketing or home use. Does not become pithy quickly. The roots become quite large; 1½ in. in diameter before becoming pithy. May also be used for forcing. Pkt., 5c; Oz., 15c; ¼ lb. 35c; lb. $1.

NON PLUS ULTRA. Scarlet, turnip shaped, forcing. Tops very small; flesh crisp and well flavored. Pkt., 5c; Oz., 10c; ¼ lb. 25c; lb. 75c.



VICK'S SCARLET GLOBE.

***LONG CINCINNATI MARKET.** A variety considerably used in the South for shipping north in winter and also extensively grown around Cincinnati, O. An excellent market gardener's sort and also good for the home garden. Roots well formed, perfectly straight, 6 to 7 in. long. Tops very small. Flesh crisp; does not become pithy at all early. Pkt., 5c; Oz., 10c; ¼ lb. 20c; lb. 65c.

***TURNIP EARLY SCARLET WHITE TIPPED.** Very early, bright scarlet, white tipped, globe shaped radish, excellent quality. Pkt., 5c; Oz., 10c; ¼ lb. 20c; lb. 65c.

***WOOD'S EARLY FRAME.** An excellent variety for forcing and also for first crop sowing outdoors; hardy; half long. Pkt., 5c; Oz., 20c; ¼ lb. 20c; lb. 65c.

EARLY WHITE BOX. Excellent for forcing or outdoor growth. One of the very best for fall use. It makes rapid growth but may be left until it reaches a diameter of 2 in. before becoming pithy. Pkt., 5c; Oz., 10c; ¼ lb. 20c; lb. 55c.

***VICK'S SCARLET GLOBE.** One of the very best early sorts. Adapted either to hot-house or outdoors. Stands heat better than many other varieties and it does not become pithy as soon as many other sorts. Ready for use in about 25 days. Pkt., 5c; Oz., 10c; ¼ lb. 30c; lb. $1.00.

***WHITE STRASBURG SUMMER.** Considered to be one of the very best large white summer sorts. Roots remain in condition for use for a long time; become 4 to 5 in. long, 1 to 2 in. in diameter. Pkt., 5c; Oz., 10c; ¼ lb. 30c; lb. 90c.

CHARTIER LONG WHITE (Nonpareil). Developed from Improved Chartier and just like it only color is white instead of scarlet. Pkt., 5c; Oz., 10c; ¼ lb. 25c; lb. 75c.

***FRENCH BREAKFAST.** An excellent variety either for forcing or for outdoor growth. Very early, scarlet with white tip. It gets pithy rather soon, but excellent while it lasts. Pkt., 5c; Oz., 15c; ¼ lb. 20c; lb. 55c.

HALF LONG DEEP SCARLET (Paris Beauty). A variety extensively grown in the South and good anywhere. May be used for forcing. Roots about 2½ in. long. Deep scarlet. Does not become pithy very quickly. Pkt., 5c; Oz., 10c; ¼ lb. 20c; lb. 50c.

LONG WHITE VIENNA OR LADY FINGER. A summer variety with medium sized tops; white roots 6 or 7 in. long; from ⅝ to ⅞ in. in diameter. Flesh crisp and tender. Pkt., 5c; Oz., 10c; ¼ lb. 20c; lb. 75c.

***EARLY LONG SCARLET SHORT TOP.** Standard sort, excellent for forcing or for outdoor growing. Tops short and comparatively small, roots bright red, long, slender, growing about half out of the ground 5 to 6 in. long. Ready to use in about 25 days. Pkt., 5c; Oz., 10c; ¼ lb. 20c; lb. 55c.

ICICLE RADISH.

RADISH—Continued

***WHITE STUTTGART SUMMER.** Large size often 4 in. in diameter; top shaped; flesh white; does not become pithy until very late. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 90c.

ROSE CHINA WINTER. One of the best winter varieties. Roots large, 1 to 2 in. in diameter; 4 to 5 in. long. Keeps well throughout the autumn and winter. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 60c.

WINTER LONG BLACK SPANISH. Black skin, white flesh. A winter variety. Roots when mature, 7 to 9 in. long; 2 to 3 in. in diameter. A good keeper. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

WINTER ROUND BLACK SPANISH. Similar to the Long Black Spanish, except that it is top-shaped. 3 to 4 in. in diameter; skin black; flesh white; keeps well. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 55c.

***WINTER CELESTIAL.** The whitest and least pungent of the winter varieties. Roots 6 to 9 in. long; 2 to 3½ in. in diameter. Fine for market gardeners. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, 90c.

CALIFORNIA MAMMOTH WHITE. An excellent variety. Later than Celestial and not quite so mild. Roots white; nine to twelve inches long; three to four inches in diameter. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

LONG BRIGHTEST SCARLET WHITE TIPPED, OR CARDINAL WHITE TIPPED. Excellent either for home use or for market. The upper part scarlet and pure white tips; handsome and a good seller. Should be ready for use about 25 days after planting. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

***LONG SCARLET CHARTIER or SHEPHERD.** An excellent sort for spring and summer use. Roots 7 and 8 in. long when mature. Scarlet shading into white at the tip. Very popular among market gardeners. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 60c.

***EARLY SCARLET TURNIP.** A good variety either for forcing or outdoor planting early. Round or turnip shaped with small tops. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 55c.

SANDWICH ISLAND SALSIFY.

Haferwurzel SALSIFY Salifi

This plant is used for a substitute for oysters, and we like it fully as well as the oysters themselves. It is either used in soup or scalloped with best results. Sow early in the spring on rather light, fertile ground, in drills 18 inches apart, thin the plants to 1 or 1½ inches in the row. The roots are more inclined to fork on ground heavily manured with fresh manure or on sod ground. Before the ground freezes they should be dug and stored as you would other root crops. Light freezing greatly benefits the flavor.

LONG WHITE. Well-known, standard variety. Pkt., 5c; Oz., 15c; ¼ lb, 30c; lb, $1.10.

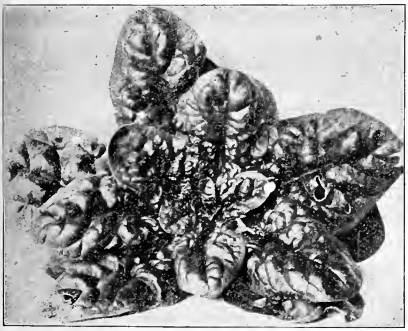
MAMMOTH SANDWICH ISLAND. An improved variety that grows nearly double the size of the old sorts, uniform and of the best quality and flavor. Pkt., 5c; Oz., 15c; ¼ lb, 40c; lb, $1.30.

Spinat SPINACH Espinaca

This plant will grow in any ordinary soil and its cultivation is easy. For summer use sow early in the spring; for early spring use sow in August or September in drills 12 to 14 inches apart. Before winter cover lightly with sod or litter and uncover in the spring when new growth begins.

LONG SEASON. Plants comparatively small but compact, short stemmed, leaves dark green, spreading flatly on the ground, unsurpassed for marketing during the warm summer months. Stands longer before going to seed than other sorts. Oz., 10c; ¼ lb, 15c; lb, 30c.

LONG STANDING. A very popular variety with market gardeners. It does not run to seed quickly, grows rather large, becoming somewhat procumbent when mature; leaves broad, arrow-shaped or rounded, somewhat crumpled. Oz., 5c; ¼ lb, 10c; lb, 30c.



LONG-STANDING THICK-LEAVED.

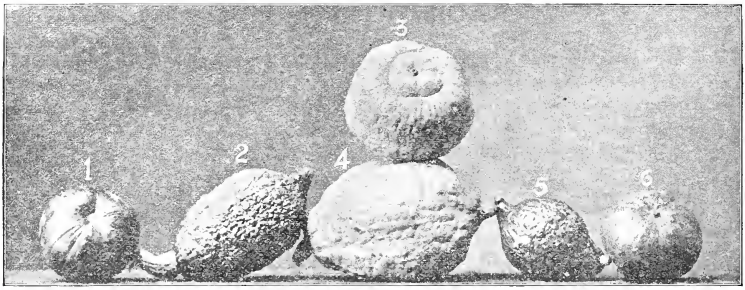
BLOOMSDALE OR SAVOY LEAVED. A favorite with Southern truckers as it is hard and a splendid shipper, leaves thick and blistered, very hardy. Oz., 5c; ¼ lb, 10c; lb, 30c.

NEW ZEALAND. Stems and leaves are soft, fleshy and thick. The plant resists heat excellently, grows well all season and will furnish delicious greens throughout the entire summer. Pick off the leaves from the stem, cooking them alone. Oz., 10c; ¼ lb, 30c; lb, $1.00.

PRICKLY OR WINTER. This variety may be seeded either in fall or spring, well adapted for each purpose. Plant becomes quite large at maturity, yields large quantities of medium sized leaves. Oz., 5c; ¼ lb, 10c; lb, 30c.

VICTORIA. This variety is of true Savoy type with dense foliage, broad, dark green leaves, a great heat resister, remains in prime condition two or three weeks after many other sorts have run to seed. Oz., 5c; ¼ lb, 15c; lb, 35c.

BROAD FLANDERS. A standard variety with bright green, broad, thick leaves, usually arrow-shaped, but sometimes rounded, surface fairly smooth but sometimes crumpled, well liked by market gardeners. Oz., 5c; ¼ lb, 15c; lb, 35c.



1. EARLY SUGAR PUMPKIN. 2. WARTED HUBBARD SQUASH. 3. TURK'S CAP SQUASH.
4. BOSTON MARROW SQUASH. 5. RED HUBBARD SQUASH.
6. GOLDEN BRONZE SQUASH.

Speise Kurbisse SQUASH Calabaza

Culture is the same as for Cucumbers and Melons. The bush varieties should be four feet apart, the running kinds six to ten feet apart

SQUASH—Running Varieties

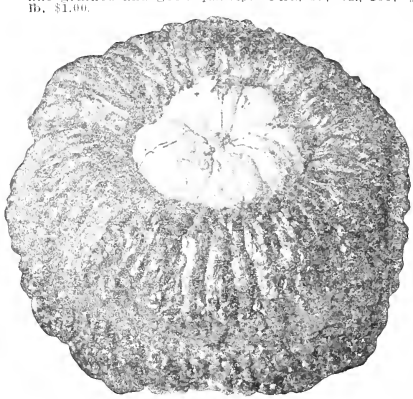
BOSTON MARROW. A moderately early, decidedly prolific variety, 10 to 14 inches in diameter, 12 to 16 inches long, light salmon color, very thick meated, fine grained, sweet, excellent quality every way and a reasonably good keeper. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

DELICIOUS. A moderately early, medium sized variety, about seven or eight inches in diameter, ten to fourteen inches long, dark green color, thick flesh, fine grained, sweet and very dry. A reasonably good keeper. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, $1.00.

ESSEX HYBRID OR TURK'S CAP. A cylindrical shaped squash with a large nub or "Turk's Cap" at the blossom end, seven to twelve inches in diameter, light salmon color, hard shelled, almost solid meated, very fine grained, sweet and of finest flavor. It is a good keeper. We consider this one of the very best varieties. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

FORDHOOK. We have these both in the running and bush varieties. The running variety is a little the more uniform of the two, fruit small, about four inches in diameter and ten or twelve inches long, cream color, moderately hard shelled, fine grained and good quality. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, $1.00.

DELICIOUS SQUASH.



TURK'S CAP.

GOLDEN BRONZE. A medium sized variety about eight inches in diameter, blunt on the blossom end, color about like Hubbard except for a shade of bronze, flesh thick, fine grained, sweet in flavor. An excellent keeper. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb, $1.00.

HUBBARD. A deservedly standard variety, medium sized, ten to twelve inches in diameter, dark green, moderately warted, thick fleshed, fine grained, sweet, dry, an excellent keeper. We believe our strain of this squash to be equal to any. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 80c.

RED OR GOLDEN HUBBARD. A variety similar to the original Hubbard, but with a deep salmon colored skin and smaller in size, being six to eight inches in diameter, ten to twelve inches long, shell hard, flesh fine grained and sweet, an excellent keeper. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

WARTED HUBBARD. A variety greatly esteemed by market gardeners as it is one of the best sellers on market. It is larger than the original Hubbard, with larger warts. Our strain usually runs ten to fourteen inches in diameter, very productive, not quite as nice quality as the original Hubbard. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 80c.

MARBLEHEAD. An old standard sort and one of the best; size and shape about like the original Hubbard, skin grey, shell hard, fine grained, sweet and a good keeper. Pkt., 5c; Oz., 10c; ¼ lb, 35c; lb, $1.10.

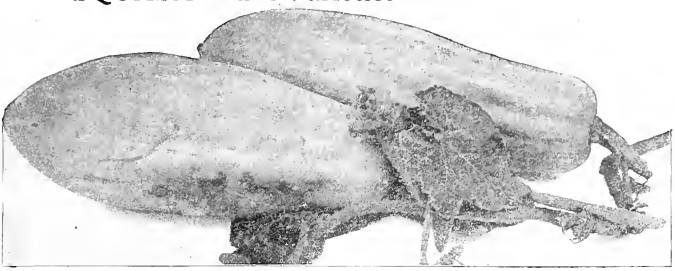
DELICATA. An early, small variety, about the size of the Fordhook, or a trifle larger, and similar shape, yellow and green mottled; productive; a good keeper; not quite as rich as Turk's Cap or Hubbard. Pkt., 5c; Oz., 10c; ¼ lb, 30c; lb. 90c.

SQUASH—Bush Varieties

FORDHOOK. For our own use we like this the best of any of the summer squashes. The fruit is small, 3 or 4 in. in diameter; 6 to 8 in. long; the flesh firm, fine grained and sweet, a good yielder. Pkt., 10c; Oz., 20c; ¼ lb, 50c; lb, $1.25.

SUMMER CROOKNECK. An old standard sort, early and productive, fruit crookneck, medium sized, rich golden yellow, thickly warted. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

EARLY WHITE BUSH SCALLOP. The plants are of true bush growth, early maturing, fruit medium sized and productive. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.



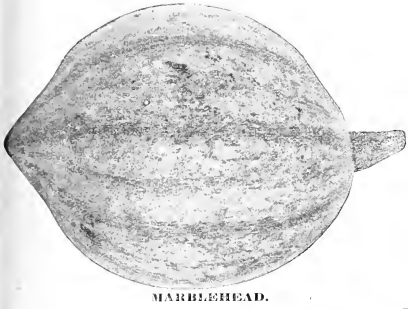
FORDHOOK SQUASH.

MAMMOTH WHITE BUSH SCALLOP. An early maturing, flat, scalloped, bush squash of largest size and handsome appearance. Frequently grows 12 to 14 inches in diameter. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

MAMMOTH YELLOW BUSH. Very similar to the Mammoth White Scalloped Bush, except in color, which is pale yellow; flesh creamy yellow. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 60c.

MAMMOTH SUMMER CROOKNECK. The largest and one of the earliest crookneck summer squashes, vines of dwarf, bushy habit, very productive, fruit true crookneck type, rich golden yellow, thickly warted, large, attractive looking. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

EARLY YELLOW BUSH SCALLOP. A very early, flattened, scalloped, bush squash or moderate size, productive and fine grained. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 65c.



MARBLEHEAD.

PURPLE TOP WHITE GLOBE. As indicated by its name, this variety is white underground, purple above, flesh white, fine grained and tender, should be used when about 3 in. in diameter. Keeps well and good for market use. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

EARLY PURPLE TOP MILAN. The earliest flat variety top purple, bottoms white, medium sized, flat shaped, uniform and good quality. Pkt., 5c; Oz., 15c; ¼ lb, 35c; lb, $1.00.

EXTRA EARLY WHITE MILAN. Similar to purple top Milan, pure white, tops very small, strap-leaved, upright and compact, can be planted close together. Probably earliest variety we have. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

PURPLE TOP STRAP LEAVED. An old fashioned standard variety, and probably more used than any other. Leaves few, entire and upright in growth, roots flat, medium sized, purple above and white below. Flesh white and of good quality, should be used at about 2½ inches for table use, but grows larger for stock feeding. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

YELLOW STONE. One of the best yellow varieties, early, yellow flesh, round, somewhat flattened, good quality, and also good for stock. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

COW HORN OR LONG WHITE. Extensively used for stock feeding and for plowing under. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

WHITE EGG. Quick growing, egg shaped, white and smooth, tops small, flesh clear white, firm, fine grained and sweet. Should be used when roots are two inches in diameter and 3½ inches long for market gardeners. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 75c.

Rübe TURNIP Nabō

The early varieties may be sowed as early as the ground can be worked in the spring. For fall and main crop, the latter half of June is proper seeding time. The Ruta Baga varieties should be planted in drills at least 18 in. apart and thinned out to six inches in the row. They should be sown about June 15th.

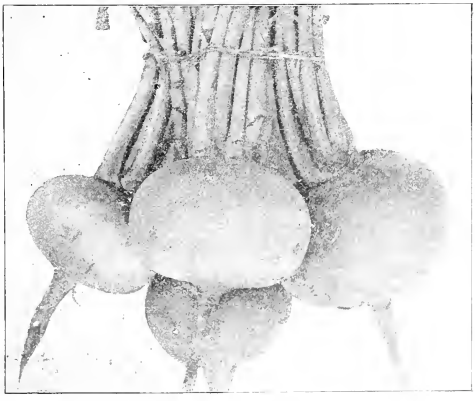
POMERANIAN WHITE GLOBE. Similar to Purple Top White Globe, excepting color, which is pure white. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 40c.

YELLOW GLOBE OR AMBER. A large, sweet variety, recommended either for table or stock. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

GOLDEN BALL OR ORANGE JELLY. Recommended as the best yellow sort for table use, a good keeper, yellow, globe shaped, early and rapid grower. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

EARLY SNOWBALL. A medium sized, early variety, pure white, with good flavor. Pkt., 5c; Oz., 10c; ¼ lb, 25c; lb, 70c.

EARLY WHITE FLAT DUTCH. A standard, flat, early variety, much used in the South, good sized, pure white with small top, fine grained and sweet, grows about 2½ in. in diameter. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 45c.



EARLY SNOWBALL.

RUTA BAGAS

CARTER'S IMPROVED PURPLE TOP. Can be used for the table or for stock feeding. Nearly round, skin yellow, with purple top, flesh yellow and solid, hardy and a heavy yielder. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 40c.

IMPROVED AMERICAN PURPLE TOP. One of the best varieties, roots purple above, yellow below ground, smooth, with short neck, globular form and large size. Pkt., 5c; Oz., 10c, ¼ lb, 15c; lb, 40c.

LAING'S PURPLE TOP. Used either for table or stock. One of the earliest. Round necks, small tops, strap leaved, skin purple above, yellow below, flesh yellow, neck small. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 50c.

MONARCH, TANKARD OR ELEPHANT. Originated by Carter and Company and very highly prized in England, Scotland and Ireland. Large tankard shaped roots, with small neck and tops, purple above ground, yellow beneath. Pkt., 5c; Oz., 10c; ¼ lb, 15c; lb, 50c.

SKIRVING'S KING OF SWEDES. A large purple top, round or oval variety, of yellow flesh and excellent quality. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 60c.

WHITE SWEDE OR SWEET RUSSIAN. A large variety, nearly white, the best keeper of any white sort, tops small, strap leaved, roots very large, nearly club shaped, with small neck. Pkt., 5c; Oz., 10c; ¼ lb, 20c; lb, 50c.

Liebesapfel TOMATO Tomate

Tomatoes thrive on a variety of soils and it is difficult to lay down certain rules for their requirements in this respect. They must have, for best results, favorable conditions throughout the entire early portion of their life, as any check to their growth seriously diminishes the yield. Sow in hot-bed six to eight weeks before ready to set out of doors; transplant when all danger from frost is over. The plants are usually set about four feet apart each way. The dwarf or tree tomatoes may be set a little closer than the other sorts.

IMPERIAL. A purple variety, very smooth, medium size, reasonably heavy yielding and of very good quality. We consider this tomato good enough for very critical trade. Pkt., 10c; Oz., 20c; ¼ lb, 60c; lb, $2.00.

MATCHLESS. A main crop variety, medium sized, smooth, free from cracks, cardinal color, cuts reasonably well. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.65.

DWARF GIANT. An extremely large fruited purple variety, somewhat on the Ponderosa type, rough but cuts very well. Pkt., 10c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $3.75.

MAGNUS. A purple fruited, medium sized, globe-shaped variety, well adapted to canning or market purposes. We did not like this variety as first introduced, because it did not yield for us, but our present strain, which has been changed somewhat from the original, made the highest yield of smooth fruit of any variety in our trial grounds this year. Pkt., 10c; ½ Oz., 15c; Oz., 30c; ¼ lb, 75c; lb, $2.75.

DWARF CHAMPION. An early purple fruited variety of true dwarf or tree growth. A well deserved variety everywhere. The dwarf varieties yield less per plant than larger growing sorts, but are very economical of space. Pkt., 10c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.20

EARLIANA. This variety has for years been absolutely indispensable. It is ten days earlier than nearly all other sorts. It yields very well, fruit is reasonably smooth and good flavored. Our strain of this tomato we consider as good as any Earliana that we have ever seen. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.75.

ACME. An early, purple fruited variety, much prized by market gardeners who ship or have home markets, smooth, medium sized, attractive. Our strain is very choice, especially in solidity of flesh. Pkt., 10c; Oz., 20c; ¼ lb, 60c; lb, $2.00.

GLOBE. A globe shaped, purple variety, well liked in the South for shipping north. Pkt., 10c; ½ Oz., 15c; Oz., 25c; ¼ lb, 90c; lb, $2.75.

Read Special offer on page 36

See page 36 for Vegetable Seed Collections.

LIVINGSTON'S GLOBE.

TOMATOES—Continued.

BEAUTY. One of the very best purple varieties, early, a splendid yielder and cuts well. Our strain of this tomato was among six of the highest yielders of smooth, perfect tomatoes that were grown in our trial grounds this year. Pkt., 10c; Oz., 25c; ¼ lb, 70c; lb, $2.25.

BUCKEYE STATE. Early, purple, rather large, smooth and attractive looking. One of the best large varieties. Our strain cuts very well. Pkt., 10c; ½ Oz., 20c; Oz., 30c; ¼ lb, $1.00; lb, $3.75.

ENORMOUS. A scarlet variety that cuts about like Ponderosa, and is nearly as large, but smoother. An excellent sort for the home table. Pkt., 10c; ½ Oz., 20c; Oz., 35c; ¼ lb, $1.25.

FAVORITE. A scarlet variety, useful for canning and the home garden, smooth, with few cracks. Pkt., 10c; Oz., 25c; ¼ lb, 70c; lb, $2.50.

GOLDEN QUEEN. A splendid yellow variety of medium size, quite smooth, with few cracks, cuts meaty and fine, and a good yielder. Pkt., 10c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.50.

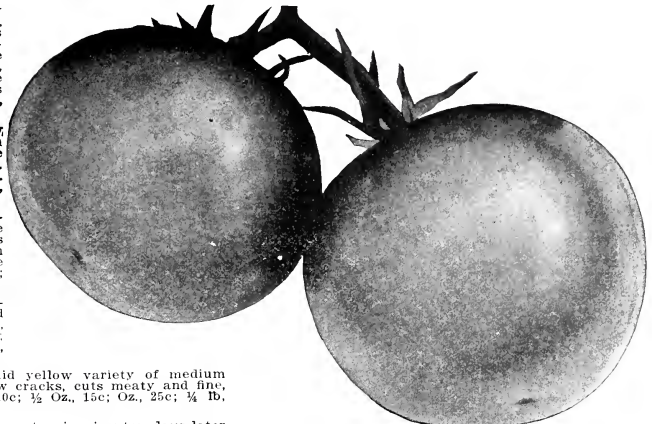
JUNE PINK. An early pink tomato, ripening ten days later than Earliana, smooth, without the Earliana's hard core. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.60.

CORELESS. A bright, red globe shaped variety, well adapted for canning, reasonably smooth and good sized. Pkt., 10c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.60.

PERFECTION. A crimson variety, medium sized, rather globe shaped, of excellent quality, and one that cuts above average; a good canner or shipper. Pkt., 10c; ½ Oz., 15c; Oz., 20c; ¼ lb, 60c; lb, $2.00.

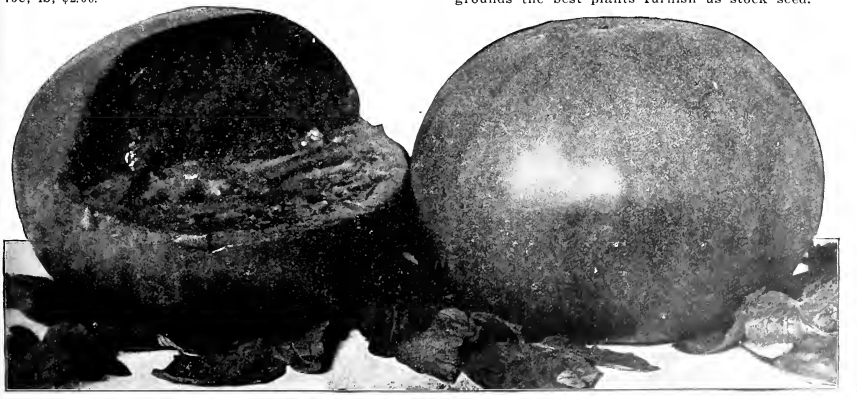
PONDEROSA. This is about the largest fruited variety in our trial grounds, fruit somewhat oblong in form, deep through, ribbed or ridged, purple color. This variety has perhaps the smallest seed cells and the firmest flesh of anything in our grounds. We have used it for years as a slicing variety for the table and could hardly do without it. It is not a good variety for market gardeners or shipping. Pkt., 10c; ½ Oz., 20c; Oz., 35c; ¼ lb, $1.00; lb, $3.75.

STONE. A solid, late, bright red, main crop variety, used either for canning or slicing. Probably more used for this purpose than any other variety, many canning factories using nothing else. Pkt., 10c; ½ Oz., 20c; Oz., 30c; ¼ lb, 75c; lb, $2.60.

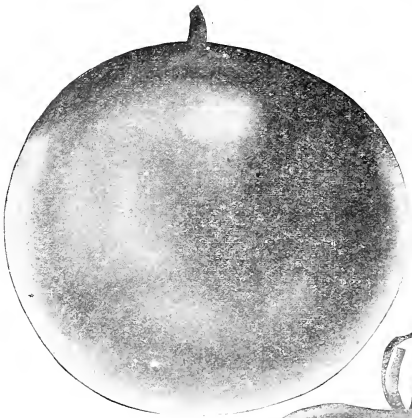


Tomato growing in our trial grounds is one of the most interesting and, incidentally, one of the most expensive operations that we have. Each variety is placed side by side, under identical conditions. At each gathering our men place the fruit of each variety in a separate box, properly marked. Our foreman then grades these tomatoes into smooth, rough, culls, and rot, weighing each one separately, and recording the weight in his stock book. At the end of the season we can tell at a glance the exact number of pounds of each class of tomatoes produced by every variety.

We also have notes as to the time of maturity, general appearance, and as to how each one cuts. In this way we constantly test out our own varieties, and our own strains, as well as those of the other leading seedmen and growers. After making these careful tests we have no hesitation at all about saying just how good each offered variety is. Then in our breeding grounds the work is carried on as carefully and accurately as in the trial grounds. In each place we carefully compare the choicest strains of the greatest growers we have. In the trial grounds, of course, we can select no seed. In the breeding grounds the best plants furnish us stock seed.



BEAUTY.



BONNY BEST.

Vegetable Plants

HORSE RADISH SETS — MALINER KREN. This new variety comes from Bohemia and is one of the finest ever seen in the United States. Cuttings planted in April will produce fine, large radish the first of the following October. It is white, free from disease, grows to great size; yields very heavily; grows on any kind of soil and stands dry weather well. It requires 10,000 cuttings to plant an acre. This variety has produced four tons per acre, worth $100 per ton. Prices — Roots ready for planting, by mail, postpaid, 6 for 15c; Doz. 25c; 50 for 75c; 100 for $1.35. By express, 500 for $4.50.

COMMON HORSE RADISH. Roots ready for planting, by mail, postpaid, Doz. 25c; 50 for 60c; 100 for 90c. By express, not paid, 500 for $2.50; 1,000 for $4.50.

ASPARAGUS ROOTS. We offer nothing but the best. We sell 500 roots at thousand rates; 50 at hundred rates.

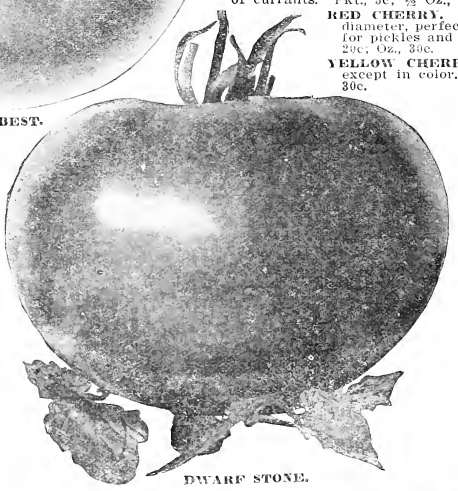
Varieties	Post Paid East of Rocky Mts. Doz.	100	By Express Not Prepaid. 100	1,000
Bonvalet Giant	$0.10	$1.75	$0.85	$7.00
Colossal	.35	1.25	.75	5.50
Columbian Mammoth	.35	1.75	.75	6.00
Argenteuil	.35	1.25	.75	6.00
1,000 for $8.00.				
Palmetto	.35	1.25	.75	5.50

TRANSPLANTED ROOTS ASPARAGUS will make a cutting bed in one season. Price for any variety:

Mail Prepaid.		Express not Prepaid.	
Doz.	100	100	1000
$1.00	$4.00	$3.00	$20.00

RHUBARB ROOTS. Extra large field cuttings. Ea., 15c; 2 for 25c; 4 for 45c.

By Express not paid, 12 for $1.00; 50 for $3.50; 100 for $6.00; 1,000 for $40.00.



DWARF STONE.

DWARF STONE. A dwarf vined, very smooth, red tomato good sized and cuts very well. Pkt., 10c; ½ Oz., 20c; Oz. 30c; ¼ lb, 85c; lb, $3.00.

TRUCKER'S FAVORITE. A very choice, large fruited purple tomato, yielding for us one of six best, the fruit smooth, without cracks and cutting exceptionally well We can thoroughly recommend this variety. Pkt., 5c Oz., 25c; ¼ lb, 75c; lb, $2.25.

BONNY BEST. A medium sized variety, extremely smooth and uniform, scarlet color, a splendid sort for shipping market, for home use or for forcing under glass. Pkt., 10c; Oz., 25c; ¼ lb, 75c; lb, $2.60.

COMET. A scarlet variety, medium sized, round and smooth, excellent either for outdoor use or for forcing under glass. Pkt., 10c; Oz., 25c; ¼ lb, 75c; lb, $2.60.

CHALK'S EARLY JEWEL. About ten days later than Earliana, a good yielder, color scarlet, smooth, with much better core than Earliana. Our strain of this tomato is of the very best. Pkt., 5c; ½ Oz., 15c; Oz., 25c; ¼ lb, 75c; lb, $2.50.

SMALL FRUITED SORTS

CURRANT. Decidedly ornamental, resembles long branches of currants. Pkt., 5c; ½ Oz., 20c; Oz., 30c.

RED CHERRY. Small, about ⅝ inches in diameter, perfectly round and smooth, used for pickles and preserves. Pkt., 5c; ½ Oz., 20c; Oz., 30c.

YELLOW CHERRY. Same as Red Cherry, except in color. Pkt., 5c; ½ Oz., 20c; Oz., 30c.

RED PEACH. Resembles a peach in shape. Skin covered with slight bloom or pubescence, used for preserving or table decoration. Pkt., 5c; ½ Oz., 15c; Oz., 25c.

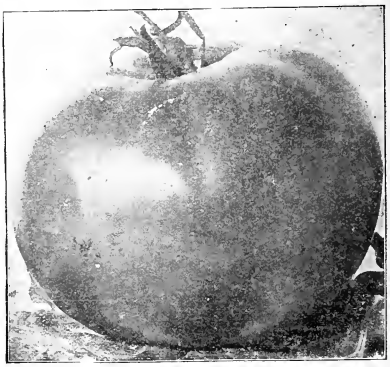
STRAWBERRY OR HUSK TOMATO. Plants of low sprcading growth, fruit enclosed in a husk, sweet flavored, much used for preserving or making pies. Pkt., 5c; ½ Oz., 20c; Oz., 30c.

YELLOW PEACH. Resembles the Red Peach, except in color Pkt., 5c; ½ Oz., 15c; Oz., 25c.

RED PEAR. Pear shaped, used for preserves or "Tomato Figs." Pkt, 5c; ½ Oz., 20c Oz., 30c.

YELLOW PEAR. Same as Red Pear, but yellow in color. Pkt., 5c; ½ Oz., 20c; Oz., 30c.

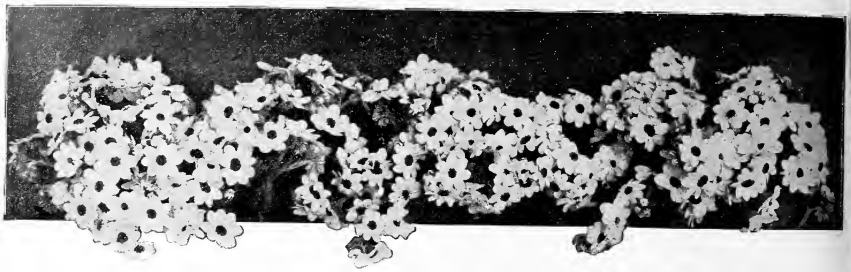
YELLOW PLUM. Same as Red Plum, excepting color. Pkt., 5c; ½ Oz., 20c; Oz., 30c.



CHALK'S JEWEL.

FLOWER SEEDS

SHASTA DAISIES ON THE GROUNDS OF ONE OF OUR GROWERS OUTSIDE PARIS.



FLOWER SEED COLLECTIONS.

Our Flower Seeds have been selected from the choicest offerings of the best growers in the United States and Europe. They are not cheap seeds; they are the best quality and measure up to the same standard we maintain in our Field and Garden Seeds.

The following collections are made from our best stocks. You can have a lovely garden and a wealth of bloom from our 50 cent collection; if your space is limited, our 25 cent collection will give you the best results of any combination you can plant.

ALL FLOWER SEED PRICES ARE POSTPAID.

COLLECTION OF ANNUAL FLOWERS

20 Packets for 50 Cents.

Asters, W. B. Mixed,
Sweet Peas, Spencer Mixed
Sweet Alyssum
Balsam, Double Camellia Flowered Mixed
Calliopsis Mixed
Corn Flowers Mixed, Centaurea Cyanus
Sweet Sultan Mixed, Centaurea Imperialis
Cosmos, Tall Mixed
W. B. Mixture, Single and Double Pinks
Gaillardia, Single and Double Mixed
Mignonette, W. B. Mixed
Marigolds, Tall Mixed
Nasturtiums, Tall Mixed
Pansies, W. B. Mixed
Petunia Mixed
Phlox Drummondii, Tall Mixed
Annual Poppies, Single and Double Mixed
Scabiosa, Tall Mixed
Verbena Mixed
Zinnia, Tall Double Giant Mixed

25 Cent Collection of Annual Flowers

8 Packets for 25 Cents.

Asters, W. B. Mixed
Sweet Peas, Grandiflora Mixed
Nasturtium, Tall Mixed
Giant Pansies, Mixed
Corn Flowers Mixed, Centaurea Cyanus
W. B. Mixture, Single and Double Pinks
Petunia Mixed
Zinnia, Tall Double Giant Mixed

COLLECTION OF HARDY FLOWERS

A Beautiful Hardy Garden for 50 Cents.

Aquilegia (Columbine) Mixed
Campanula Medium (Canterbury Bell) Mixed
Delphinium Kelway's Hybrids Mixed
Foxglove Digitalis Monstrosa Mixed
Sweet William Mixed
Coreopsis Lanceolata Grandiflora
Gaillardia Kelway's Exhibition
Oriental Poppy Giant Scarlet

WILD OR CHILDREN'S GARDEN MIXTURE

A mixture composed of bright and easily grown annuals in great variety, for sowing broadcast. Pkt., 5c; Oz., 15c.

GROWING FLOWERS FROM SEED

Most flowers will grow in ordinarily good soil. Some, like the Delphiniums, must have abundance of plant food, others, like the Nasturtium, do best in thin soil. Make the surface of the bed as fine and smooth as possible, cover all seeds not more than four or five times their diameter, and press the soil firmly over the seeds. In dry seasons the ground must be kept moist by waterings while the seeds are germinating. In hot, dry summers the soil should have a thorough soaking two or three times a week; just sprinkling with a watering can does no good. Young plants should be thinned out to prevent crowding, and the ground kept free from weeds.

Annuals bloom and ripen their seed the first year and die; biennials usually bloom the second year and die, although some bloom the first year; perennials bloom and live for several successive years.

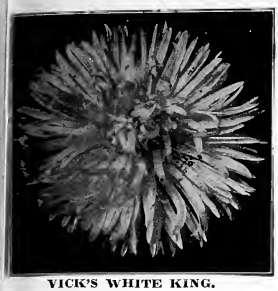
THE PRACTICAL FLOWER GARDEN

By Helena Rutherford Ely.

In this charming book Mrs. Ely gives complete and practical instructions for the culture of all the important flowers. In her lucid and delightful style she tells her experiences in her own garden, where grow all the flowers she describes.

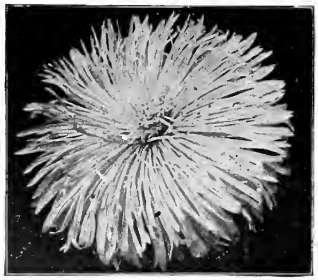
The book is beautifully gotten up, with eight colored plates and many other illustrations, and would make a splendid gift.

Cloth 12mo, net $2.00; by mail postpaid, $2.16.



VICK'S WHITE KING.

QUEEN OF THE MARKET.



OSTRICH PLUME.

ASTERS

Asters are offered in bewildering numbers. We have selected sufficient classes and varieties, in mixtures, separate colors and named sorts, differing in type of flower, height, and season, to afford succession and variety of bloom. By careful selection of seed, the Aster season may be made a long one. Our seed is grown on contract for us by the best growers, and is the very finest.

QUEEN OF THE MARKET.

The standard early Aster. Plants 18 inches high, of graceful spreading habit, strong and hardy. The flattish flowers are good sized, borne on long, graceful stems, and of a wide range of colors. Profuse bloomer, very good for early cut flowers. If started in the house, will bloom the middle of July; sown outdoors, early in August. **Mixed colors**—Pkt., 5c.

BRANCHING COMET.

In the Comet type, the petals are long, narrow, gracefully twisted and curled, forming a most artistic flower. Ours is a superior strain of Branching Comet, with strong plants two feet high, bearing many large flowers of great beauty. It is a mid-season variety. **Mixed**—Pkt., 10c.

GIANT OSTRICH PLUME.

A magnificent class, rivalling the Chrysanthemums. Plants branching and of medium height. The flowers are borne on long, slender stems, and are of the Comet type, but much larger, often four to six inches in diameter, and produced much more profusely. The petals are longer, narrower and more twisted. **Mixed**—Pkt., 10c.

BRANCHING ASTERS.

Of American origin, the most popular type grown in the United States. Plants large and vigorous, distinctly branching, two to three feet tall. Flowers of the globe type, double to the center.

VICK'S LATE BRANCHING.

Flowers are of extraordinary size, borne on stems 15 to 20 inches long. The plants often cover a space 2½ feet square. They begin blooming about August 15th if sown outdoors, but may be made to bloom earlier by starting seed in the house in March or April. They yield profusely. **Mixed**—Pkt., 10c; ¼ Oz., 50c. Separate Colors—**White, Rose, Lavender, Dark Violet, Lady Roosevelt,** Each, pkt., 10c.

VICK'S EARLY BRANCHING.

The plants are similar to the Late Branching, but the large, perfect flowers come ten days to two weeks earlier. **White, Rose, Lavender**—Each, pkt., 10c.

THE HOHENZOLLERN ASTERS.

The Hohenzollern Aster originated in Germany. We are offering two improved strains that have been worked up by an American grower, one extra early and one late. The Hohenzollern Asters resemble the Mikado, having very large Comet flowers on branching plants. The Early Hohenzollerns come before the Mikado, the flowers being very decorative, on long, slender stems, and the plants 12 to 15 inches high. The Late Hohenzollern blooms after the Mikado, at the same time as the Late Branching. The plants are very robust, the flowers immense and borne on long, stiff stems. **Late Mixed**—Pkt., 10c. **Early Mixed**—Pkt., 10c.

SNOWDRIFT.

The earliest white Aster. Plants upright, beautiful, feathery white flowers of the Comet type on long, slender stems. Pkt., 10c.

PAEONY FLOWERED.

Mid-season to late. Remarkable for the brilliant colors. Habit upright, height two feet. The large, beautiful flowers have incurved petals and form almost perfect globes. **Mixed**—Pkt., 10c; ⅛ Oz., 25c; ½ Oz., 45c.

VICK'S MIKADO.

One of the earliest of the mid-season varieties. Plants medium height, branching habit, long, stiff stems. Great fluffy flowers of the Comet type, with long, narrow, gracefully reflexed petals, of great substance. One of the best for cut flowers; a good keeper and shipper. **White, Rose, Violet, Mixed**—Pkt., 10c.

DAYBREAK.

VICK'S ROCHESTER.

A variety of Mikado and the official flower of the city of Rochester, N. Y. A mid-season variety, a little later than the White Mikado and a little earlier than the Late Branching. This is the largest Aster in cultivation. Very fine form of branching Comet. Plants about 18 in. high, unusually vigorous, sometimes with a dozen long, graceful stems to a plant. Flowers exquisite soft lavender pink from four and a half to six inches in diameter. Petals long, narrow, curled and twisted. Pkt., 10c.

VICK'S LAVENDER GEM.

Blooms between Queen of the Market and the mid-season Asters. Plants erect, about 18 in. high, branching close to the ground. Flowers average 4 in. in diameter, of the Ostrich Plume type, with a large portion of partly tubular florets, giving to the flower the appearance of a ragged Chrysanthemum. In color it is a beautiful pale lavender, deepening with age. Pkt., 20c

BRANCHING PEERLESS PINK.

Blooms just a little ahead of the other Late Branching, but has the same characteristics. Perfect double flowers of pale shell pink, delicate and beautiful. Pkt., 10c.

PAEONY FLOWERED.

BRANCHING ASTER.

ASTERS—Continued

DAYBREAK.

The beautiful Daybreak class is early mid-season. Plants upright and bushy, 18 inches high. The flowers are of the globe type, 2½ to 3 inches in diameter, quaint and lovely, produced in such profusion as to almost cover the plants. A valuable bedding variety. We offer **Daybreak**, pale flesh pink, and **Purity**, snow white. Either—Pkt., 10c.

VICK'S PINK ENHANTRESS.

BRANCHING PEACH BLOSSOM.

A splendid Late Branching variety. Plants non-lateral, few long, graceful stems, crowned by very double flowers. Pkt., 10c.

VICK'S PINK ENCHANTRESS.

A wonderfully beautiful variety, between mid-season and late. Plants upright, tall and strong. Flowers are as large as the Late Branching, color of the "Pink Enchantress" Carnation. The petals are medium length, broad and loosely arranged, giving a soft and pleasing effect, which adds much to the charm of the delicately colored flowers. The blossoms are very lasting. It is a good variety to grow under glass. Pkt., 20c.

BRANCHING SCARLET GEM.

An effective bedding variety. Plants of the Branching type, flowers medium size, the nearest approach to scarlet that has been produced in Asters. A bed of this variety in bloom is very rich and beautiful. Pkt., 10c.

VICK'S AUTUMN GLORY.

The last of the Asters to bloom. New, very late Branching Aster, coming after the others are past their prime. Plants large and strong, color pure soft shell pink. Pkt., 25c.

KING ASTERS.

A very striking and handsome class. The King Asters bloom with the Late Branching, and the plants are similar in habit, but have exceptionally long stems; they attain a height of 2½ feet. The very large flowers are distinct, and different from any other variety, being composed of long, narrow petals folded lengthwise, giving a quilled appearance to the flower. They are of great substance, and last longer than any other Aster.

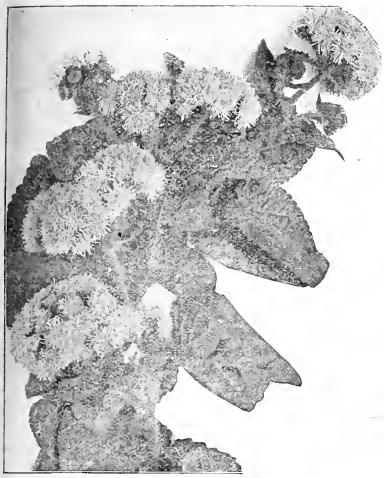
VICK'S VIOLET KING is rich violet purple, center petals twisted into a strong whirl. Pkt., 10c.

VICK'S ROSE KING differs from the Violet King in color only, being brilliant rose. Pkt., 10c.

VICK'S WHITE KING differs from the Rose and Violet in being upright in habit, while the petals are not quite so strongly folded, giving to the flower a softer appearance. Pkt., 20c.

CREGO PINK.

Beautiful late Aster of the Hohenzollern Comet type. The plants have the size of the Late Branching, and the same habit, growing two to two and a half feet high. Flowers four to five inches across, long, beautifully curled petals. The color, which is the distinctive feature, is different from that of any other Aster, and is best described as pure shell pink. Everyone should grow this Aster, which is considered by some growers the most beautiful of all. Pkt., 10c.



AGERATUM.

ASTERS—Continued

ROYAL.

A charming new Aster, early mid-season, coming soon after Queen of the Market and ahead of the Late Branching. The plants are very graceful, strong and vigorous, resembling the Late Branching, but not so tall, branching close to the ground. The flowers are of the size of the Late Branching. The petals are broad, incurved or shell-shaped, giving a lovely effect of shading. This is considered by many to be the best general purpose Aster, its vigor enabling it to stand conditions that would be sure death to other kinds. **White, Pink, Lavender,** Each—Pkt., 10c.

VICTORIA.

Old standard early mid-season variety, free blooming and excellent for bedding. Plants pyramidal in habit, two feet high. Large, flat flowers resembling a double Dahlia, with broad, flat petals curving outward. **Mixed**—Pkt., 10c.

W. B. MIXTURE TALL BRANCHING ASTERS.

This mixture is composed of the best Tall Branching varieties, and is designed for those of our customers who prefer mixed seed to the separate varieties. Large Pkt., 10c; ⅛ Oz., 25c.

W. B. COLLECTION OF ASTERS.

This collection will give you a pleasing variety, and a long succession of bloom.

One packet each of the following: **Early Hohenzollern, Mikado, Late Hohenzollern, Late Branching, Paeony Flowered, "Rochester," Scarlet Gem. All for 50c.**

AGERATUM

Hardy annual, one of our best summer blooming plants, furnishing some of the finest blues. They begin to bloom early and continue until heavy frost. The dwarf varieties are among the best bedding plants. Sow under glass early or outdoors later. They do well in hot sun, and can stand poor conditions.

AGERATUM MEXICANUM. Plants 1½ to 3 feet tall, flowers soft light blue. Pkt., 5c.

BLUE PERFECTION. The deepest blue Ageratum. Splendid cluster of flowers, forming dense half-globes, 9 in. Pkt., 10c.

LITTLE BLUE STAR. A charming new variety. Many very small light blue flowers. Plants not over 4 or 5 inches. Pkt., 10c. Mixed—Pkt., 5c; ¼ Oz., 15c.

SWEET ALYSSUM

Indispensable for borders, and useful for baskets and rock work. Thrifty and healthy, a continuous bloomer until severe frost. For borders sow thickly in open ground. For winter bloom, sow late in August.

ALYSSUM MARITIMUM (Sweet Alyssum). Fragrant white flowers. Pkt., 5c; ½ Oz., 15c; Oz., 25c.

LITTLE GEM. Compact growth, 6 inches high. Pkt., 5c; ¼ Oz., 15c; Oz., 25c.

CARPET OF SNOW. Beautiful. Forms a close mat completely covering the ground. Pkt., 5c; ¼ Oz., 15c; ½ Oz., 25c; Oz., 40c.

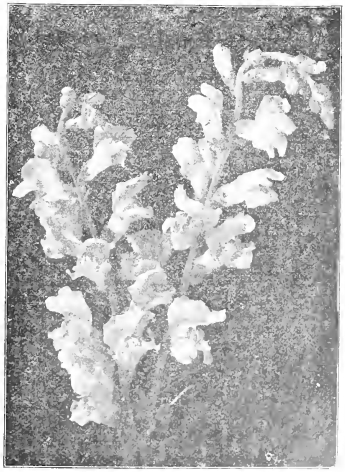
ANTIRRHINUM (Snapdragon)

Fine, old-fashioned flower, hardy perennial blooming the first year from seed. It is best treated as an annual. The rich spikes of brilliant, curiously shaped flowers are borne well above the glossy leaves. For early flowers sow under glass in warm, dry, moderately enriched soil. Average height, 1½ feet.

TALL VARIETIES. Alba Rosea, white with pink lip; **Firefly,** scarlet with white throat; **Queen Victoria,** superb pure white; **Striped Mixed**—Each., Pkt., 10c. **Tall Mixed**—Pkt., 5c; ¼ Oz., 15c. **Dwarf Mixed**—Pkt., 5c; ¼ Oz., 15c.

ARCTOTIS GRANDIS

BLUE-EYED AFRICAN DAISY. A very attractive annual, fine for cutting, and easily grown. Plants 2 to 3 feet across, with silvery, deeply cut foliage. Daisy-like flowers 2½ in. across, white with sky-blue eye surrounded by yellow zone, reverse side of petals lilac. Sow out doors in spring. Pkt., 5c.



ANTIRRHINUM.

AQUILEGIA.

AQUILEGIA
(Columbine)

An elegant border plant. It forms large clumps and blooms profusely through May and June. The beautiful and graceful pendant flowers are borne well above the handsome foliage which never becomes unsightly. The seeds are of rather slow germination and should be sown in open ground early in spring.

COERULEA (Rocky Mountain Blue Columbine). One of our most beautiful native flowers. Sepals deep blue, petals white; 3 ft. Pkt., 15c.

ROSE QUEEN. This splendid novelty has large, long spurred flowers of rose and white yellow anthers. Pkt. 15c.

CHRYSANTHEA. This is also of the long spurred type and has clear golden yellow flowers. It blooms for a long time. Three feet. Pkt., 15c.

CLEMATAQUILA OR SPURLESS AQUILEGIA. This is a new strain and well worth including in your collection. It has all the delicate grace of the other Aquilegia. The Anemone-like flowers are spurless and are produced in shades of blue, wine, pink, purple, black, lavender, blush, white, rose, pure white and violet. Pkt., 25c.

SINGLE MIXED. Pkt., 5c.

DOUBLE MIXED. Pkt., 5c.

ADLUMIA CIRRHOSA
(Allegheny Vine)

A graceful, hardy biennial climber, with finely cut foliage and oddly shaped pale pink flowers. It loves the shade and cannot stand the hot sun. Pkt., 5c.

BALLOON VINE
(Cardiospermum)

A graceful, quick growing annual climber, with tiny white flowers and pretty foliage, followed by curiously inflated seed vessels. 6 feet. Pkt., 5c., Oz., 20c.

ARABIS ALPINA

A hardy perennial, six inches in height. It is one of the earliest flowers to bloom in the spring. The flowers, which resemble those of Sweet Alyssum, are very fragrant and completely cover the plant. It is one of the best plants for rock work. Pkt., 10c.

BALSAM

Choice seed is essential for fine Balsams, and ours is the best. We offer the finest double only. The flowers are large and elegant, of most charming shades of pink, scarlet, lilac, crimson and rose, self-colored and spotted. The plants should be given plenty of room, 12 to 18 inches apart. They like hot sun, rich soil, and plenty of water.

DOUBLE CAMELLIA FLOWERED. Mixed, White, Rose, Scarlet, Each—Pkt., 10c; ¼ Oz., 40c.

BARTONIA AUREA

This is a very pretty flowering plant belonging to the Gentian family. It is a hardy annual 12 inches in height. The flowers resemble the Wild Rose, and are bright, clear golden yellow in color. Pkt., 5c.

BRACHYCOME—Swan River Daisy

Dainty, pretty little annuals, growing about 12 inches high, covered with countless small star-like flowers. A fine little edging plant. Blue, White, Rose, Mixed. Each—Pkt., 5c.

CORN FLOWER ASTER

The beautiful "Corn Flower Aster." Hardy perennial, 1½ to 2 feet tall, bearing in profusion its Corn Flower-like, soft lavender blue flowers from July until frost. It is very easily grown, does well in any dry, open situation, and is fine for cutting or bedding. Pkt., 10c.

BALSAM.

CALENDULA (Pot Marigold)

Hardy annual, one foot high, of easiest culture. Flowers somewhat resemble double Daisies, and show every shade of yellow from ivory to deep orange. Plants somewhat coarse, one foot high. Sow in open ground in spring. They bloom all summer and autumn. Mixed—Pkt., 5c; Oz., 20c.

CALLIOPSIS (Annual Coreopsis)

This is one of the daintiest and prettiest annuals that can be grown. The graceful plants are of slender growth, with finely cut foliage. The daisy-like flowers are of warm and harmonious tints of yellow, rich red-maroon and brown. Sow thinly in the spring where the plants are to remain. They last a long time when cut.

GOLDEN RAY. Flowers yellow with dark purple-brown center. Pkt., 5c.

CORONATA. Bright yellow; very fine. Pkt., 5c.

TIGER STAR. New. Dark brown and yellow, richly tigered flower, the petals of which are twisted like the Cactus Dahlia. Compact growth, 8 inches high. Strikingly handsome. Pkt., 10c.

RADIATA. Also one of the new kinds; dark brown, very rich and beautiful flowers. Pkt., 5c.

MIXED ANNUAL. All of the best varieties in choicest mixture. Pkt., 5c; Oz., 20c.

CALLIOPSIS.

COREOPSIS

LANCEOLATA GRANDIFLORA. Very beautiful, hardy perennial, and one of the best, blooming the first year from seed if it is sown early. Plants two to three feet tall, with graceful flowers somewhat resembling the Cosmos, of purest golden yellow, and borne on long, slender stems, from June until late autumn. Pkt., 10c; ¼ Oz., 20c; Oz., 60c.

CHRYSANTHEMUMS

Annual Chrysanthemums bloom freely from early summer until fall; perennial varieties in the fall only.

MIXED ANNUALS, SINGLE AND DOUBLE. The plants average one and one-half feet. The flowers are of bright and beautiful colors, very showy and effective for borders and also cut flowers. They are very useful also for brightening shrubberies and drives. Sow under glass, or in the open ground. The early growth should be pinched back to make compact bushy plants. Pkt., 5c; ¼ Oz., 15c.

JAPANESE HYBRIDS. These are gorgeous and magnificent plants. In height they usually range from two to three and a half feet. If not disbudded each separate plant will produce from two to four hundred flowers, white and also all shades of lemon, yellow, orange, pink, rose, bronze and rich crimson. Sow seed under glass in February or March, keep as cool as possible, and then harden off in cold frames before setting them out in the open ground. If treated in this way, they will begin blooming during the latter part of August and continue until quite heavy frosts; light frosts do not harm them. Pkt., 5c.

SHASTA DAISY. See Page 71. This is a very fine perennial plant, blooming the second year from seed. The Daisy-like flowers of glistening white are borne on good stiff stems two feet long. Soak the seed in warm water before planting. Pkt., 10c.

CAMPANULA

A fine, old-fashioned, hardy flower. Some of the most glorious effects of the garden are obtained by the use of it in masses. Campanula Medium, Canterbury Bell, is the loveliest of all. Sow the seeds outdoors in spring. The biennial kinds may be wintered in a cold frame, or outdoors if on well-drained soil and given some protection by rough litter, being careful not to cover the crowns too heavily. After the biennials are done blooming, the plants become unsightly and must be pulled up. A good place to use late Asters.

Campanula Medium

CANTERBURY BELL. Hardy biennial. Begins blooming in June. 2 feet.

Single White, Single Blue, Single Mixed, Double Mixed, Each—Pkt., 5c.

CAMPANULA CALYCANTHEMA. "Cup and Saucer." Shades of blue and white. As the name implies, the flowers resemble a cup and saucer. Mixed, Pkt., 10c.

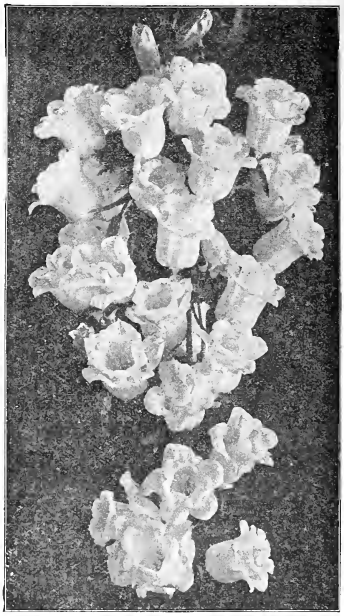
Campanula Persicifolia

"PEACH-LEAVED BELLFLOWER." Hardy perennial, superb blue and white flowers. Two to four feet. June and July. Pkt., 10c.

Campanula Pyramidalis

"CHIMNEY BELLFLOWER." Hardy perennial. Tall, erect, pyramidal in form. Spikes of blue and white 3 to 4 feet long. A magnificent pot plant for decorative work. Pkt., 10c.

CANTERBURY BELL.



DOUBLE CAMPANULA.

CANDYTUFT

Useful bedding plant. Will grow anywhere, but needs plenty of moisture. Sow outdoors in April.

GIANT HYACINTH FLOWERED. White, annual. One foot. Large trusses of pure white flowers. Pkt., 10c; ¼ Oz., 15c; ½ Oz., 25c; Oz., 40c.

MIXED ANNUAL SORTS. Pkt., 5c; Oz., 15c.

SEMPERVIRENS. A very pretty little evergreen plant, with white flowers, useful for rockeries. Hardy perennial. One foot. Pkt., 10c.

CARNATIONS

Carnations as beautiful and fragrant as greenhouse varieties, although not so large, may be grown from seed, and will bloom the first year. Seeds may be sown in spring under glass or outdoors.

GIANT MARGARET MIXED. A very vigorous race, semi-dwarf, free-blooming, large fragrant flowers in very beautiful colors. Pkt., 10c.

CHAUBAUD PERPETUAL. Neat and symmetrical in habit, constant and profuse bloomer. Elegant and very sweet flowers. Pkt., 10c.

COSMOS.

CENTAUREA

This is one of the very best hardy annuals for cutting, of simplest culture, a free bloomer, with attractive flowers on long stems. Sow in open ground in spring. They self-sow very freely.

CENTAUREA IMPERIALIS (Sweet Sultan). Plants 2 to 3 feet high, strong and bushy. The flowers are 2 to 3 inches across, finely fringed, and very artistic. They come in white and soft shades of yellow, lilac, rose, pink and purple.

SUAVOLENS (Yellow Sweet Sultan). Large, fragrant, yellow flowers. Pkt., 5c.

MIXED. Pkt., 5c; ¼ Oz., 25c; Oz., 75c.

CENTAUREA CYANUS (Corn Flower, Ragged Sailor, Bachelor's Button). Old and well-loved hardy annual. It freely reseeds itself, and the self-sown plants come up in the fall and will bloom early the next year.

EMPEROR WILLIAM CORN FLOWER. Deep, rich blue. Pkt., 5c; ½ Oz., 20c.

MIXED. Pkt., 5c; ½ Oz., 15c.

MIXED IMPERIALIS AND CYANUS. Pkt., 5c; ¼ Oz., 25c; Oz., 75c.

COBAEA SCANDENS

A handsome and rapid-growing annual climber. Dark green foliage, large bell-shaped flowers borne freely on graceful stems. Twenty feet. Very vigorous. Start seed in house in rather dry soil. White, Violet, Each—5c per Pkt.

COSMOS

Sow seed of early sort in the open ground; late blooming start in the house in March or April. If the plants are topped when half grown they bloom earlier. The early-flowering Cosmos grows four feet tall, the late-blooming ten feet.

"DAWN." Beautiful and delicate flowers, white flushed rose. Pkt., 5c.

MIXED. White and shades of rose and crimson. Pkt., 5c; ¼ Oz., 15c; ½ Oz., 25c.

EARLY FLOWERING COSMOS.

LADY LENOX. Lovely shell-pink flowers of great size and substance, borne on unusually long stems. Pkt., 10c; ¼ Oz., 40c.

CRIMSON RAY. New and quite distinct. The petals are narrow and fluted. Color, rich velvety crimson. Pkt., 10c.

WHITE. Pkt., 5c; ¼ Oz., 15c.

PINK. Pkt., 5c; ¼ Oz., 15c.

CRIMSON. Pkt., 5c; ¼ Oz., 15c.

MIXED. Pkt., 5c; ¼ Oz., 10c.

CELOSIA (Cockscomb)

Well known annual. Seed may be started in the house and transplanted or sown directly in the ground. Celosias make very beautiful pot plants.

CRISTATA (Cockscomb). Mixed colors. Pkt., 5c.

PLUMOSA (Ostrich Plume). Crimson, orange, Each—Pkt., 5c.

Cypress Vine (Ipomoea Quamlocit).

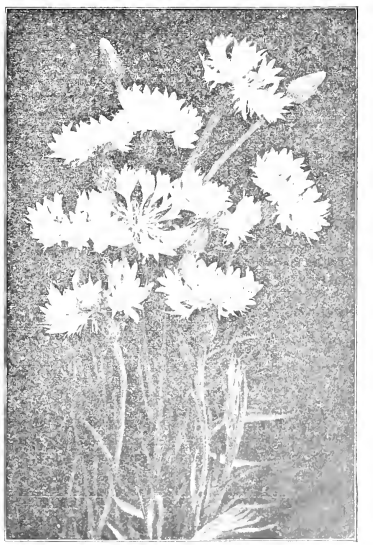
Well-known annual climber, with finely cut, delicate foliage, small star-shaped flowers of white and crimson. Ten feet. Soak the seed in hot water before planting, sow in spring where the plants are to remain, and keep the soil quite moist.

WHITE, CRIMSON, MIXED, Each—Pkt., 5c; ½ Oz., 15c.

CYCLAMEN

Beautiful green-house plants with elegant foliage and flowers of wonderful loveliness. These are well known as green-house pot plants and great numbers of them are offered, but they may be very easily grown from seed. Sow the seed in boxes. It will be at least two months before the little plants appear above ground, as tiny bulbs are formed before the plants come up. Be sure that the soil is free from wire worms before planting the seed or they will ruin the little bulbs. The plants may then be shifted to flower pots or to other boxes, giving them more room. These pots or boxes may then be placed out of doors in a sheltered situation, where there is no danger of the tender leaves being battered by violent rains; they must also be in a partially shaded location.

W. B. CYCLAMEN MIXTURE. This is a splendid mixture composed of many beautiful colors. Pkt., 25c.

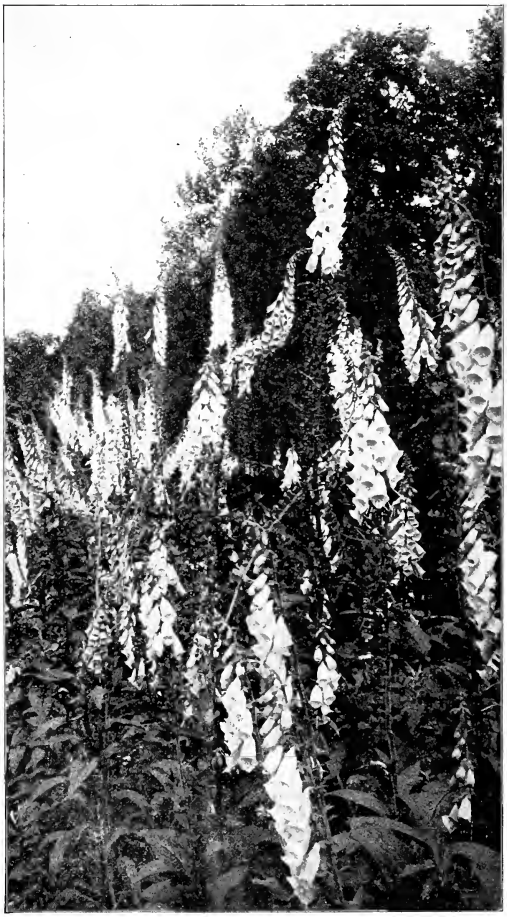


CORNFLOWER.

DOUBLE DAISIES (Bellis Perennis).

Charming little perennials, growing six inches tall. They may be sown in the house in February or March. Sow in light, rich soil, covering the seeds to about three times their own thickness and pressing the soil firmly over them. Keep in a warm window, hot-bed or greenhouse. When they are well out of the seed leaf, they may be transplanted to new boxes and set out in the open ground when danger from frost is over, or they may be sown outdoors in August or September, and either wintered in cold frames and transplanted to their permanent positions in spring, or left outside with some protection of straw or litter. They make very bright borders and can be used very nicely in beds of Spring-blooming bulbs. They love the shade.

LONGFELLOW. Dark rose. Pkt., 10c.
SNOWBALL. Beautiful pure white. Pkt., 10c.
DOUBLE MIXED. Pkt., 10c.



DIGITALIS.

DIGITALIS (Foxglove).

The Foxglove is a handsome and dignified hardy perennial. The long flower spikes of thimble-shaped flowers two to three feet long are of soft shades of lavender, purple, rose and yellow, tigered and spotted. They make a splendid background for lower plants. Foxgloves, with Sweet Williams in the foreground, make a beautiful picture. They are most satisfactory when treated as perennials, sowing the seed every year in rich, deep soil. Seeds must be kept moist until they germinate.

DIGITALIS MONSTROSIA. This is the best strain of this splendid perennial. Flowers are very large, bell-shaped, wonderfully beautiful. The top flower is Campanula-like. All colors, mixed, Pkt., 5c; ¼ Oz., 30c.

DIGITALIS PURPUREA. This is the well-known common purple Foxglove. Pkt., 5c.

DIGITALIS ALBA. This is a very fine and attractive white variety, with handsome Gloxina-like flowers. It forms very robust plants, and is beautiful for cutting. Pkt., 5c.

DIGITALIS ROSEA. A rose colored sort, very handsome in contrast with other colors. The flowers are very bright and showy. Pkt., 5c.

DIGITALIS MACULATA SUPERBA. This is a splendid spotted strain, with remarkably beautiful flowers. Pkt., 10c.

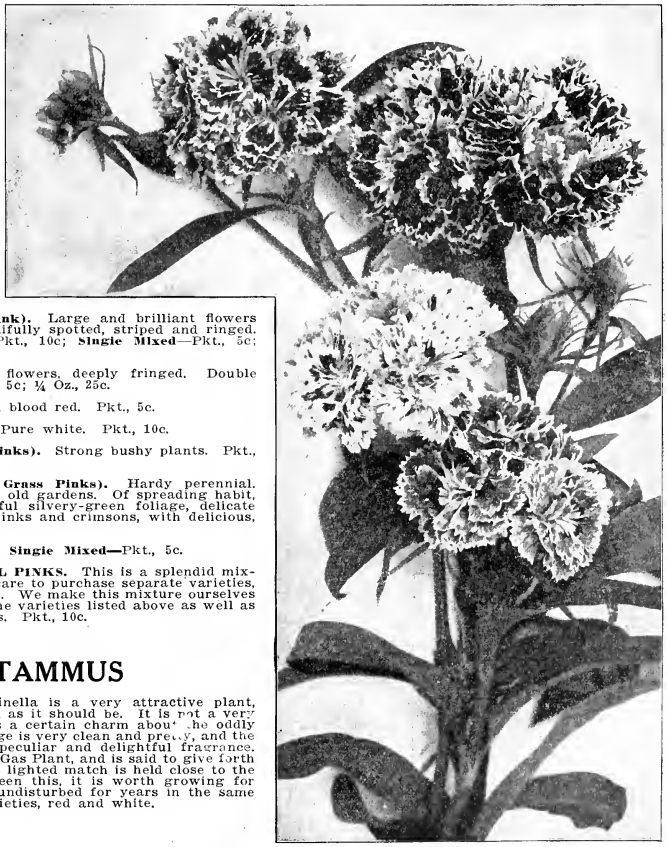
INSTRUCTIONS FOR GROWING HARDY FLOWERS ON PAGE 82.

DIANTHUS (Pinks)

Old-fashioned flowers that have never been surpassed for beauty and refinement. The biennial Chinese and Japanese varieties will bloom the first year from seed, go through the winter, and bloom early the next summer. They are brilliant and beautiful grown in masses. Seed should be sown outdoors early in the spring, when the ground is cool.

Our seed is the choicest, saved from the finest flowers of a noted collection.

CHINENSIS (China or India Pink). Of old gardens. Double, Mixed—Pkt., 5c; ¼ Oz., 20c.



JAPAN PINKS.

HEDDEWIGII (Japan Pink). Large and brilliant flowers perfectly formed, beautifully spotted, striped and ringed. **Coice Double Mixed**—Pkt., 10c; **Single Mixed**—Pkt., 5c; ¼ Oz., 20c.

LACINIATUS. Immense flowers, deeply fringed. Double and Single Mixed—Pkt., 5c; ¼ Oz., 25c.

CRIMSON BELLE. Dark, blood red. Pkt., 5c.

QUEEN OF HOLLAND. Pure white. Pkt., 10c.

IMPERIALIS (Imperial Pinks). Strong bushy plants. Pkt., 5c.

PLUMARIUS (Clove or Grass Pinks). Hardy perennial. The sweet May Pink of old gardens. Of spreading habit, 10 inches high, beautiful silvery-green foliage, delicate flowers of white, soft pinks and crimsons, with delicious, clove-like fragrance.

Double Mixed—Pkt., 10c; **Single Mixed**—Pkt., 5c.

W. B. MIXTURE ANNUAL PINKS. This is a splendid mixture and if you do not care to purchase separate varieties, we recommend it to you. We make this mixture ourselves and it is composed of the varieties listed above as well as many other named sorts. Pkt., 10c.

DICTAMMUS

Dictammum or Fraxinella is a very attractive plant, and is not as well known as it should be. It is not a very showy plant, but there is a certain charm about the oddly shaped flowers. The foliage is very clean and pretty, and the viscid seed pods have a peculiar and delightful fragrance. It is sometimes called the Gas Plant, and is said to give forth gas, which will ignite if a lighted match is held close to the plant. We have never seen this, it is worth growing for itself. It should be left undisturbed for years in the same place. There are two varieties, red and white.

WHITE—Pkt., 10c.

RED—Pkt., 10c.

DOLICHOS

HYACINTH BEAN. This is a rapidly growing and free flowering climber, which is useful for screens. It is quite well known.

PURPLE SOUDON. This is a very decorative plant. The stems are purple while the flowers are bright rose. Pkt., 5c.

WHITE BUSH. This is a bush variety of the Hyacinth Bean, growing from 18 to 30 inches tall. The long flower spikes are creamy white. This is a very ornamental plant, and one which has a long blooming season, being constantly in flower from the middle of July until frost. Pkt., 10c.

DAYLIGHT. This is a Japanese variety; very beautiful, with large white flowers. Pkt., 10c.

We Prepay Postage or Express on All Vegetable and Flower Seeds Ordered by Packet, Ounce or Quarter Pound.

DELPHINIUM (Larkspur)

Among the Delphiniums are found some of our grandest perennials, and many pretty annuals. They give us our richest and most brilliant blues.

Annual Varieties

Sow the seed in the open ground in spring or fall. The annual varieties re-seed very freely. They do best in cool, moist soil, the richer the better: one cannot fertilize too heavily for Larkspurs.

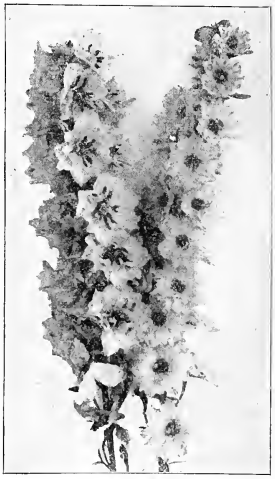
EMPEROR. Branching plants, 2 feet tall, 10 to 20 slender spikes of bright and showy flowers. Mixed—Pkt., 5c; ½ Oz., 25c.

TALL ROCKET. Throws up a long single spike of bloom, 2 feet. Mixed—Pkt., 5c; ½ Oz., 75c.

DWARF ROCKET. Grows about one foot tall. Mixed—Pkt., 5c; ½ Oz., 15c.

GIANT HYACINTH FLOWERED. Flowers resemble double Hyacinths, and are of beautiful, delicate shades. Pkt., 5c; ½ Oz., 15c.

DWARF HYACINTH FLOWERED. Pkt., 5c; ½ Oz., 15c.



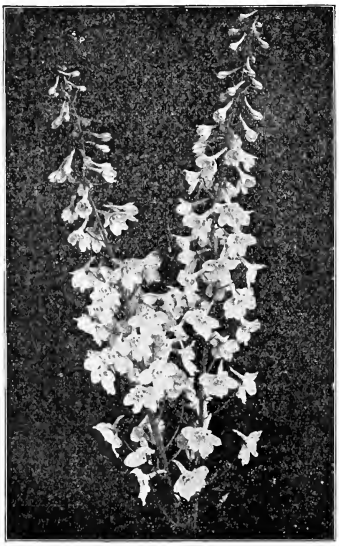
Perennial Varieties

Stately and noble plants, with spikes 6 to 8 feet high, clothed with the beautiful blue flowers for half their length. Sometimes forty spikes are produced on one plant. The foliage resembles that of the Acanthus, the model for the capitals in Corinthian architecture.

Anyone can have a bed of Delphiniums; they are easily started, are hardy as rocks, and increase in size and beauty from year to year. Seed may be started in boxes or in the open ground in the spring, and the plants will bloom the second year, but will not be at their best until the third. Plants should be set from 2½ to 4 feet apart. Soil should be deep, rich and mellow. Delphiniums are huge feeders, and it is of no use to try to grow them unless they are well supplied with plant food. They bloom from the end of May to August. When the first flowers fade, the plants should be cut to the ground, and no seed allowed to form. A second crop of fresh green foliage will then start from the root and cover the bed; flower spikes will also be produced, although they will not be very large.

Messrs. Kelway & Son, of Langport, England, have done wonderful things with this plant, and their Delphiniums are the most beautiful in the world. Our seed comes direct from them. As the named varieties do not come true from seed, we offer nothing but the mixed seed.

KELWAY'S HYBRIDS in finest mixture. Pkt., 15c.



Hardy Flowers

There is much fascination in growing Hardy Flowers from seed. This, of necessity, is slower than buying the plants and setting them out, but it is also much cheaper and there is a certain pleasure in growing the flowers one's self. Perennials are not hard to grow, but the seeds take longer to germinate than the seeds of annuals, and they require moisture. Sowing seeds in the dust is just the same as throwing them away, for they will not sprout. Also, if they are sown in moist ground and get one or two rains and are then allowed to dry out before they appear above the ground, they will not come up. The ground must be kept moist all the time that the seed is germinating and while the little plants are growing. When they become good sized they do not require as much moisture as annual flowers. Seeds of some perennials remain in the ground for months before all of them will germinate. A good place to start the seeds is in a cold frame, or you may have a hardy seed bed in some sheltered, partially shaded situation and grow the young plants in the open.

Foxglove and Canterbury Bells are not at all hard to take through their first summer, but are often killed the first winter. Canterbury Bells are apt to heave out, and therefore should be wintered on well-drained soil. In covering hardy flowers, be careful not to cover the crowns too closely. Coarse litter or corn stalks form the best protection. Some perennials bloom the first year from seed, if sown early, but are not at their best until the second year.

GAILLARDIA.

GODETIA

Free-blooming annual, with wide-open flowers of satiny texture, lovely colors, delicately shaded, one and one-half feet tall. It likes best rather thin soil and shady places. Sow in open ground or cold frame.

Mixed, White, Pink, Crimson, Spotted and Blotched—Pkt., 5c.

Gysophilia Paniculata
(Baby's Breath)

A delicately beautiful, hardy perennial. Its mist-like flowers are useful for lightening other flowers in bouquets. It is easily grown from seed. Sow in the open ground in spring. As its name indicates, it is a lime lover, and does best in soils of that formation. Pkt., 5c.

Dimorpotheca Aurantiaca

GOLDEN ORANGE DAISY. Golden Star of the Veldt. A new and showy annual from South Africa. It is very easily grown and a free bloomer. Its daisy-like flowers, 2½ to 3¾ inches across, are of lustrous orange-gold. Height, 1 foot. Sow outdoors in spring. Pkt., 10c.

AURANTIACA HYBRIDS. Marvelously beautiful, resembling the parent in plant and habit, but with flowers of purest white, bluish-white, sulphur, lemon, orange, salmon, many of them zoned with another color. Mixed, Pkt., 15c.

ESCHOLTZIA. (California Poppy)

A bright, free-flowering annual, of low, spreading habit, finely cut, silvery foliage, rich, poppy-like flowers. Of easiest culture. Sow the seeds where they are to remain.

GOLDEN WEST. Bright yellow and orange. Pkt., 5c.
CARMINE KING. Deepest crimson. Pkt., 10c.
ROSE QUEEN. Splendid. Pkt., 10c.
SINGLE MIXED. Brilliant colors only. Pkt., 10c; ¼ Oz., 20c.
DOUBLE MIXED. Brilliant colors only. Pkt., 10c; ¼ Oz., 20c.

FORGET-ME-NOT (Myosotis)

Lovely little flowers. Hardy biennials. They flourish in cool, moist situations. Sow in spring in boxes or open ground. The average height is 6 in.

ALPESTRIS. Pretty little trailer, with bright blue flowers. Pkt., 5c.
VICTORIA. Strong growing dwarf habit. Large sky-blue flowers. Pkt., 10c.

FOUR-O'CLOCK
(Marvel of Peru)

Old-fashioned flower. Tender perennial, bearing hundreds of blooms in white, yellow and crimson, streaked and splotched. Strong, bushy plants. Set plants two feet apart. Roots may be kept over winter, like Dahlias.

MIXED—Pkt., 5c.

GAILLARDIA (Blanket Flower)

Showy annuals which will grow anywhere and under any conditions. Good for bedding and cut flowers. Shades of red and yellow predominate. Sow seed in the spring in open ground. They like best a good, light soil and plenty of sun, but are not at all particular as to conditions. Flowers are produced from July until freezing weather.

PICTA SINGLE MIXED. Brilliant red and yellow daisy-like flowers. Pkt., 5c.
LORENZIANA DOUBLE MIXED. Double flowers with tubular florets, in shades of orange, claret, red and yellow. Pkt., 5c.
GAILLARDIA PERENNIAL, Kelway's Exhibition. Splendid hardy perennials, both plants and flowers larger than the annuals. Semi-double, in shades of orange, scarlet, crimson and yellow, with brown centers, two feet in height. Our strain of this fine hardy plant is quite distinct from the old kind. Enormous flowers and very stout habit. Pkt., 10c.

ESCHOLTZIA.

HOLLYHOCKS (Althaea Rosea)

Hollyhocks are at their best treated as biennials, the seed sown in April or May, not later than June, to flower the second year, and in their final transplanting given a foot of space each way. They like a rich, well-drained soil.

We offer CHATER'S SUPERB DOUBLE, THE FINEST HOLLYHOCKS IN THE WORLD.

CHATER'S SUPERB WHITE. Peach Blossom, Crimson, Yellow, Each—Pkt., 10c.

CHATER'S SUPERB MIXED. Wonderful colors, white shades of red, crimson, rose and yellow, ashen gray and black. Pkt., 10c; ⅛ Oz., 30c.

ALLEGHENY HOLLYHOCKS. Bloom the first year from seed. Very lovely semi-double fringed flowers, in all the colors found in Hollyhocks. Bloom from July until frost. Mixed—Pkt., 10c; ¼ Oz., 30c.

KOCHIA TRICOPHYLLA
(Summer Cypress)

Quick-growing annual, forming globe-shaped bushes; 2 to 2½ feet high, with slender leaves, at first light green, turning to carmine and blood red in the fall. Sow in spring in open ground. Pkt., 5c; ½ Oz., 15c.

LOBELIA

Dainty annuals, blooming quickly from seed and continuing in bloom all summer. Useful for beds, hanging baskets and pot culture. Foliage and flowers fine and delicate. Seed may be sown in the house or open ground.

GRACILIS. Light blue, trailing. Fine for baskets. Pkt., 5c.

COMPACTA EMPEROR WILLIAM. Light blue, for edging. Pkt., 5c.

COMPACTA CRYSTAL PALACE. A little beauty. Dark blue flowers, dark bronze-maroon foliage. Of neat and elegant habit; a fine edging plant. Six inches high. It will grow in almost any situation and produce its innumerable little flowers all summer. Pkt., 10c; ⅛ Oz., 50c.

LUPINS

Very attractive plants, free-flowering and easily grown. Large terminal spikes of fragrant pea-shaped flowers in blue, white and rose. Sow seed in spring where plants are to remain. Thin to 1½ feet apart.

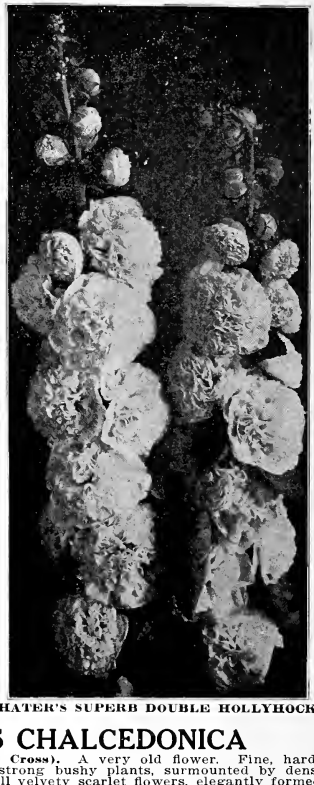
ANNUAL LUPINS MIXED. 2 feet. Pkt., 5c.

TREE LUPINS MIXED. Perennial. Very showy. 4 feet. Pkt., 15c.

TREE LUPIN SNOW QUEEN. Very fine. Pkt., 10c.

FRENCH MARIGOLD.

FOR COLLECTIONS SEE PAGE 72.



CHATER'S SUPERB DOUBLE HOLLYHOCK.

LYCHNIS CHALCEDONICA

(London Pride or Maltese Cross). A very old flower. Fine, hardy perennial, 2 feet high, strong bushy plants, surmounted by dense terminal clusters of small velvety scarlet flowers, elegantly formed, suggesting in shape the Maltese cross. Pkt., 5c.

MARIGOLD (Tagetes)

The African Marigolds have big fluffy flowers in yellow and orange. The French have little velvety flowers in yellow and orange, reddish brown and dark red, many of them handsomely marked. The Marigolds are a sturdy race, and are useful in late autumn, when the more delicate flowers have perished. Seed may be sown in cold frame or open ground.

TALL AFRICAN MIXED. 3 feet. Pkt., 5c; ½ Oz., 20c; Oz., 35c.

DWARF AFRICAN MIXED. 18 inches. Pkt., 5c; ½ Oz., 20c; Oz., 35c.

TALL FRENCH MIXED. 2½ feet. Pkt., 5c; ½ Oz., 15c; Oz., 25c.

DWARF FRENCH MIXED. 1 foot. Pkt., 5c; ½ Oz., 15c; Oz., 25c.

MAURANDIA

Graceful, slender climbing plant, with dainty Ivy-like leaves, handsome trumpet-shaped flowers in purple, white and rose, with lighter throat. Tender perennial, fine for either outdoors or indoors. Must be started in house very early. 6 to 10 feet.

MIXED—Pkt., 10c.

MIGNONETTE (Reseda Odorata)

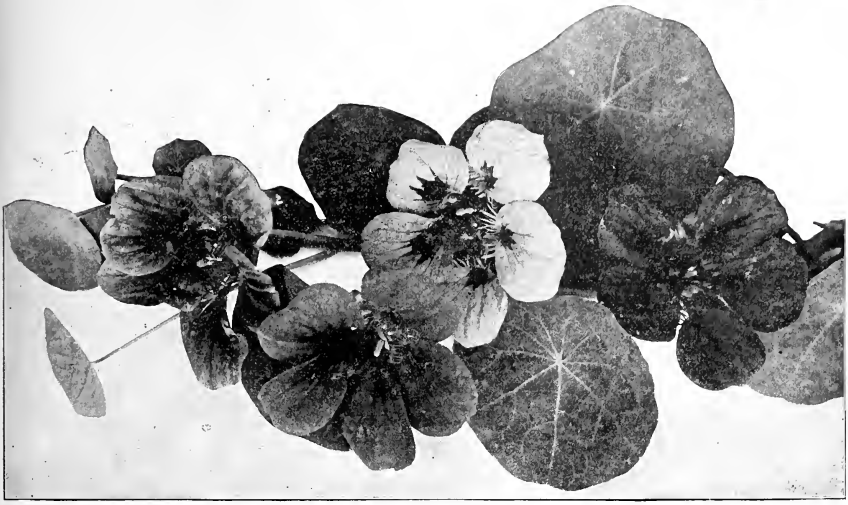
Seed may be sown at any time; it is usually sown in spring in the open ground, but may be sown during the summer for succession. July-sown seed will make good winter pot plants. Height, 6 to 12 inches.

MACHET. Thick spikes of reddish flowers. Excellent for pots, and also for outdoors. Pkt., 5c; ¼ Oz., 25c.

GOLDEN QUEEN. Very compact growth. Golden yellow flowers, very sweet. Pkt., 5c; ¼ Oz., 15c.

ODORATA. The old-fashioned Mignonette. Pkt., 5c; Oz., 10c.

W. B. MIXED. A mixture of the choicest sorts. Pkt., 5c; ½ Oz., 15c; Oz., 25c.



NASTURTIUM.

NASTURTIUMS (Tropaeolum)

Nasturtiums do best on thin soil, and should be planted thickly to insure long stems.

DWARF OR TOM THUMB NASTURTIUMS (Tropaeolum Nanum).

CHAMELEON. Very fine. On the same plant will be found self-colored flowers and others with most diversified markings. Pkt., 5c; Oz., 20c.

GOLDEN KING. Golden yellow. Pkt., 5c; Oz., 20c.

EMPRESS OF INDIA. Deep crimson; fine, dark foliage. Pkt., 5c; Oz., 20c.

VESUVIUS. Pkt., 5c; Oz., 20c.

MIXED. Pkt., 5c; Oz., 20c.

RYBURGH PERFECTION. Variegated foliage, bright scarlet flowers. A fine novelty, with leaves marked with silver, gold and green. Pkt., 5c; Oz., 25c.

TALL NASTURTIUMS (Tropaeolum Majus).

CHAMELEON. Pkt., 5c; Oz., 15c.

SUNLIGHT. Bright orange. Pkt., 5c; Oz., 15c.

YELLOW. Pkt., 5c; Oz., 15c.

SCARLET. Pkt., 5c; Oz., 15c.

SCARLET WITH YELLOW FOLIAGE. Pkt., 5c; Oz., 15c.

VESUVIUS. Salmon Rose. Dark foliage. Pkt., 5c; Oz., 15c.

TALL FINEST MIXTURE. Pkt., 5c; Oz., 10c.

STARK'S HYBRIDS. The foliage of Stark's Hybrids is variegated like the Dwarf Ryburgh Perfection. The flowers are scarlet, ruby, yellow and terra-cotta. Pkt., 5c; Oz., 20c.

NICOTAINA
(Sweet Scented Tobacco Plant)

Very easily grown, annual. Sow in boxes in spring, and transplant to the open.

AFFINIS HYBRIDS. Compact plants, 2 feet high. Mixed. Pkt., 5c.

SANDERAE. Dark carmine, free flowering. Pkt., 5c.

SILVESTRIS. An elegant variety. Plants 3 feet across, 2 to 3 feet high. Dark green leaves, and large, pure white, very sweet flowers hanging in racemes. Pkt., 5c.

MATHIOLA BICORNIS
(Night-Scented Stock)

Plants 15 inches tall, dull lilac flowers of no beauty whatever, but having an opulence of fragrance possessed by no other flower. Late in the evening it emits this perfume, which is quite distinct. Pkt., 5c.

MORNING GLORY
(Convolvulus)

MORNING GLORY (Convolvulus Major). The old-fashioned kind. 15 feet. All colors mixed. Pkt., 5c; Oz., 10c.

IMPERIAL JAPANESE. The flowers of the Japanese Morning Glory have a wonderful range of colors and markings, from pure white to carmine through all shades of blue and red, bordered, fringed, mottled and striped. The leaves are diversified in shape and color, some being plain green, others blotched with white and yellow. Pkt., 10c; ½ Oz., 15c; Oz., 25c.

MOON FLOWER
(Ipomoea Grandiflora Mexicana)

Splendid annual climbers. Vines graceful, yet sturdy, making a marvelous growth in a season. Giant flowers, 5 to 6 inches in diameter, on slender tubes. Seeds should be soaked in warm water twenty-four hours before planting, and large ones notched with a file. Start in the house, and transplant to open ground. 20 feet.

WHITE MOONFLOWER. Pure white. Pkt., 10c.

NORTHERN LIGHT. Soft lilac pink. Pkt., 10c.

SKY BLUE. Pkt., 10c.

One packet each of these three lovely Moonflowers for 25c.

NIGELLA (Love in a Mist)

An interesting and attractive annual. The bright blue or white flowers are veiled by the thread-like foliage, giving to the plant an unusual appearance. Very good for cutting. Strong plants, 1½ to 2 feet tall. Sow in spring or fall in the open ground.

MISS JEKYLL. Flowers of clear, corn-flower blue. Pkt., 10c.

HISPANICA ALBA. White Spanish. Pkt., 5c.

PANSY.

PANSY (Viola Tricolor)

Our Seed comes from one of the greatest specialists in the world.

This delightful flower justly deserves the prominent place that it occupies. The seed may be sown during August or September, either in cold frame or outdoors; in the latter case using rich, moist soil. From these beds plants may be moved before severe winter weather begins, to cold frames, setting them two or three inches apart each way; then, early in the spring three-fourths of them can be lifted for bedding, the remainder left to bloom in the frame. If desired for winter blooming, set the plants four to six inches apart in a frame, thinning out half of these in the spring; protect from severe weather by sashes, using a covering of matting or straw in very severe weather. It is, however, desirable to keep them quite cool, almost allowing them to freeze. Especially in mild weather the sash should be tilted to admit light and air. Beds may also be made out of doors, using a mulch of dry leaves with a little brush to hold them in place. Raise the bed a few inches above the ground. In such locality Pansies will winter nicely and furnish abundant bloom early in the season. Pansies are cool weather flowers. If seed is sown in spring it should be done early, because it is difficult to secure the finest bloom during the heat of the summer. Flowers are always finer and more beautiful during cool weather.

The Pansy is one of the oldest flowers in cultivation. Originally it was the size of the Violet and the improvement wrought in it, principally by the French specialists, has been wonderful. The choicest seed is necessarily very high-priced, as it requires much hand labor and very careful selections. The highest priced varieties are always the largest and finest colored. The finest varieties may be made to produce flowers at least three inches in diameter.

CASSIER'S. Very large flowered blotched. The largest-flowered class of blotched Pansies. Very showy, especially rich, quality unsurpassed. Pkt., 10c.

BUGNOT'S EXHIBITION. An incomparable strain, producing many rare and beautiful varieties. Flowers blotched and stained. Plants very strong. Pkt., 20c.

TRIMARDEAU OR GIANT PANSIES. Remarkably large-flowering, rich and varied shades. Plants hardy and vigorous. Pkt., 10c.

ORCHID OR CATTLEYA-FLOWERED. Exquisitely beautiful. Rare light shades, large frilled flowers. Pkt., 10c.

MASTERPIECE EXHIBITION. Extra select strain, quite distinct, petals crimped and curled. Large flowers of rich colors. Often called the "Spencer" Pansies. Pkt., 20c.

MERCURY. New Giant Pansy, superb dark velvety purple, with extra large flower. Pkt., 20c.

MADAME PERRET. Beautiful rose and wine shades. Giant Pansy. Pkt., 10c.

KING OF THE BLACKS. Dark velvety purple, extra large, superb flower. Pkt., 20c.

SNOW QUEEN. Pure white. Pkt., 10c.

GOLDEN QUEEN. Golden yellow. Fine bedder. Pkt., 10c.

W. B. PANSY MIXTURE

This is the richest Pansy Mixture ever offered. It contains all the best sorts, and a large proportion of the Blotched and Masterpiece varieties. It cannot be surpassed, and will produce the most beautiful Pansies that can be grown. Pkt., 15c.

PETUNIA

Care must be taken to have the soil for Petunia seed finely pulverized. Sow seed on surface, press down with a board, and cover very lightly. Sowings may be made in open ground, hotbed, cold frame, or boxes of soil in sunny windows.

PETUNIAS.

Bedding Petunias

HOWARD'S STAR. Very showy. The flowers show a five-pointed star in white on a velvety crimson ground. Pkt., 5c.

ROSY MORN. Compact little plants, covered with soft rosy pink flowers with white throat. Pkt., 5c.

BEDDING VARIETIES in finest mixture. Pkt., 5c; ⅛ oz., 20c; ¼ oz., 35c.

Large Flowering Petunias

GIANTS OF CALIFORNIA. Gorgeous flowers, 4 or 5 in. in diameter, nearly all of them ruffled or fringed, in a great variety of colors, penciled and blotched in most fascinating combinations. Pkt., 15c.

LARGE FLOWERING MIXED. A mixture of the choicest kinds. Pkt., 10c.

BALCONY PETUNIA

This is one of the worth while novelties of the season. It is of German origin, and has come very rapidly into general favor for the decoration of windows and porch boxes. It is remarkably well suited for this purpose by its great profusion and persistence of bloom, its luxuriant growth, and freely branching habit. The flowers are small but exceedingly brilliant, and quite fragrant, bright rose and carmine in color. Pkt., 25c.

PHLOX DRUMMONDII

Some of the sweetest colors in the floral kingdom are found in the annual Phloxes, glowing crimsons and scarlets, soft and delicate rose, lavender, and chamois, delicately flushed and shaded. Seed may be sown in spring in the open ground as soon as it can be worked, or in the house. Hardy, annual, self-sowing.

Tall, one foot in height. White, Scarlet, Pink, Rose, Violet, Striped, Mixed, Each—Pkt., 5c; ¼ Oz., 30c; ½ Oz., 50c.

HORTENSIFLORA. Semi-dwarf, 6 to 8 inches. Pkt., 5c; ⅛ Oz., 50c.

CECILY. Compact bushy plants, 4 inches high, large flowers of every shade. Pkt., 10c; ¼ Oz., 50c.

STAR PHLOX. Pointed. Star-shaped petals. Mixed—Pkt., 5c; ⅛ Oz., 30.

PHLOX DECUSSATA

PERENNIAL PHLOX. Branching bushy plants, 3 feet high. Large heads of finely colored flowers. Mixed—Pkt., 10c.

PLATYCODON

CHINESE BELL FLOWER. This is a very beautiful hardy perennial. It has large bell-shaped flowers of blue and white, produced in profusion during the whole season. The plants form large clumps. For planting in permanent borders or among shrubbery, the plant is very useful, and it is easily raised from seed.

Mixed Blue and White—Pkt., 5c.

POPPIES (Papaver)

ANNUAL POPPIES.

Sow early in the spring in the open ground. May also be sown in the fall. The tall varieties average 2 feet.

SINGLE ANNUAL.

BLACK PRINCE. A striking and beautiful flower. Darkest blackish brown overlaid violet, with light stamens. Pkt., 5c.

KING EDWARD. Deep scarlet, shaded crimson, beautiful. Pkt., 10c.

SHIRLEY. Delicately beautiful. Silky crinkled petals in shades of blush white, pink, rose, crimson and carmine. They are lovely flowers for cutting, although they do not last very long in water. Re-selected delicate shades mixed—Pkt., 5c; ⅛ Oz., 20c.

SINGLE ANNUAL POPPIES. Mixed—Pkt., 5c; ½ Oz., 10c.

DOUBLE ANNUAL.

FAIRY BLUSH. Great fluffy, globe-shaped flowers, pure white tipped delicate rose, beautiful. Pkt., 5c.

CARNATION FLOWERED. Large, finely formed, fringed flowers of the most wonderful richness of color. Pkt., 5c; ½ Oz., 15c; Oz., 25c.

MIGNONETTE.

PAEONY FLOWERED. Very large double flowers resembling the Paeony. Pkt., 5c; ½ Oz., 10c; Oz., 15c.

RANUNCULUS FLOWERED. Small finely formed, double flowers. Pkt., 5c; ½ Oz., 10c; Oz., 15c.

DOUBLE ANNUAL POPPIES. Mixed — Pkt., 5c; ½ Oz., 10c; Oz., 25c.

Perennial Poppies

Seed of perennial poppies may be sown outdoors in the spring or fall.

ORIENTAL POPPY, GIANT SCARLET. Splendid plant, growing 3 ft. tall and forming large clumps. Large, hairy dark green leaves, and long, strong stems. The enormous flowers are of dazzling scarlet, with black blotches. Pkt., 10c.

ORIENTAL HYBRIDS. Of the same character as the Giant Scarlet, but the flowers are of rare and beautiful colors, ranging from softest pink to deepest red, and are also found in shades of lilac and mauve. For gorgeous effect, nothing can surpass the Oriental Poppies. Oriental Hybrids Mixed—Pkt., 15c.

RANUNCULUS POPPIES.

ICELAND POPPIES. The beautiful Iceland Poppies will flower the first year from seed. They are in bloom the entire season. The plants grow in tufts about a foot high. The delicate silken flowers resemble the Annual Shirley in shape and texture, are deliciously fragrant, and range in color from pure white to orange. Mixed—Pkt., 10c.

PORTULACA (Moss Pink)

The Portulacca will grow in hot, dry situations where other plants would die. Do not sow seed until the ground is warm. They will open only in the hot sun. The average height is six inches. The foliage forms a dense mat. Both single and double varieties are dazzling bright and beautiful. The double sorts come about half true, and are like little waxen roses.

SINGLE—Rose, Crimson, Striped, Each—Pkt., 5c; ¼ Oz., 20c; Mixed—Pkt., 5c; ¼ Oz., 15c; Oz., 50c.

DOUBLE—Rose, Crimson, Striped, Mixed, Each—Pkt., 10c; ⅛ Oz., 75c.

PRIMULA (Primrose)

CHINESE PRIMROSE. Beautiful window plant. Brilliantly colored large fringed flowers. (Cultural directions on application). Pkt., 25c.

PRIMULA VULGARIS. The beautiful tufted, wild English Primrose. Grows best in moist, partially shaded places. The seed is very slow in germinating, and may stay in the ground a year, but when once established, they are quite hardy. Plants six inches high, flowers primrose yellow. Pkt., 5c.

PRIMULA ELATIOR (Polyanthus). The Munstead strain is especially fine. The Polyanthis is an old hardy garden flower that has been wonderfully improved. It is supposed to be a cross between the Primrose and Cowslip. The flowers are very rich and charming, being combinations of yellows, reds and browns, each flower having a central star of contrasting color. They make fine bedding plants, do best in partial shade, and also take very kindly to pot culture. Pkt., 15c.

PYRETHRUM

Very fine perennial, suitable for borders and for cutting. Finely cut foliage. Plants two to two and one-half feet tall. Sow outdoors in the spring.

ROSEUM. Daisy-like flowers, 2 to 3 inches in diameter, carmine rose with yellow center. Pkt., 15c.

SINGLE FINEST MIXED. Flowers 4 inches across, light rose to deep carmine. Pkt., 15c.

ORIENTAL HYBRIDS.

RHODANTHE

Delicate and beautiful everlasting flowers, rose with dark center, and white with yellow disk. Annual. One foot.
MIXED—Pkt., 5c.

RICINUS (Castor-Oil Plant)

Plant seed in open ground in rich soil, or start indoors and transplant. Allow at least four feet each way.

CAMBODGENSIS. Large palm-like leaves of darkest bronze-maroon, stalks and stems nearly black. 6 to 8 feet. Pkt., 5c; Oz., 10c.

SANGUINEIS. Green leaves, red stem and seed. Six feet. Pkt. 5c; Oz., 10c.

ZANZIBARIENSIS. The largest of all. Leaves 2½ to 4 feet across, plants 10 to 12 feet high. Pkt., 5c; Oz., 10c; ¼ lb, 25c.

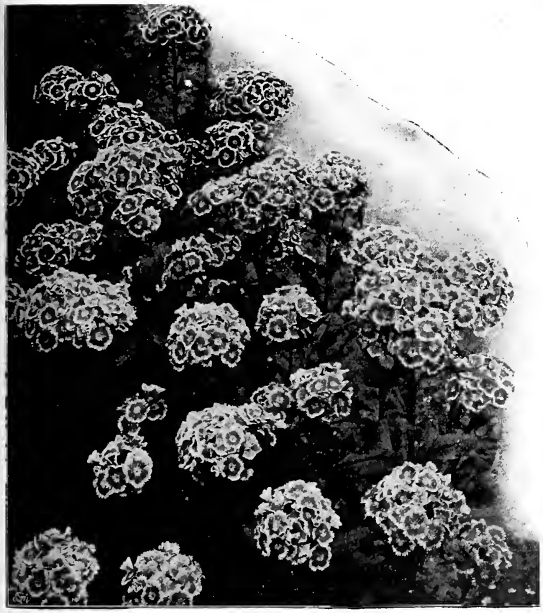
MIXED. The finest sorts. Pkt., 5c; Oz., 10c; ¼ lb, 25c.

SALPIGLOSSIS

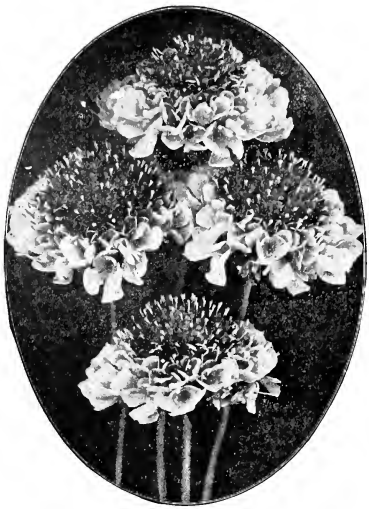
The Salpiglossis is one of the best annuals for cutting. The funnel-shaped flowers are of velvety richness, in wonderful shades of lilac, purple, crimson, scarlet, brown and gold, exquisitely pencilled, borne on long graceful stems. Of easiest culture. May be started in the house or outdoors. Height, 2½ feet.

Purple Violet, Violet veined with gold, Yellow, Brown and Gold, Each—Pkt., 10c.

EMPEROR FINEST MIXED. Robust class, with very large flowers. Pkt., 10c.



SWEET WILLIAM.



SCABIOSA.

SALVIA (Scarlet Sage)

Very easily grown from seed. Start in green house or in boxes in sunny window.

SPLENDENS. Long spikes of intense scarlet. Plants 2½ to 3 feet tall. Pkt., 10c; ⅛ Oz., 25c.

FIREBALL. This is the earliest and freest flowering Salvia. The plants are 1½ feet tall, almost covered by the fiery scarlet flowers. They begin blooming the middle of July and continue until frost. Pkt., 10c.

SCABIOSA
(Mourning Bride)

A quaint and attractive old-fashioned flower. It is easily grown and unequalled for cutting. The small, cushion-like flowers are borne on long, slender stems. They are usually white dark maroon, scarlet, yellow, rose, lilac and pink. Sow seed outdoors in the spring. The tall varieties grow 2½ feet tall, and the dwarf one foot.

SCABIOSA TALL MIXED. 2½ feet. Pkt., 5c; Oz., 50c.

DWARF MIXED. One foot. Pkt., 5c; Oz., 50c.

SNOWBALL. Pure white. Pkt., 10c.

SCARLET. Pkt., 10c.

FLESH. Pkt., 10c.

MOURNING BRIDE. Dark maroon. Pkt., 10c.

SCHIZANTHUS

Dainty, graceful annual. Neat, compact little plants, one foot high, with finely cut foliage, completely covered by multitudes of bright butterfly-like flowers in many and varied colors Pkt., 5c.

STOCKS (Gilliflower)

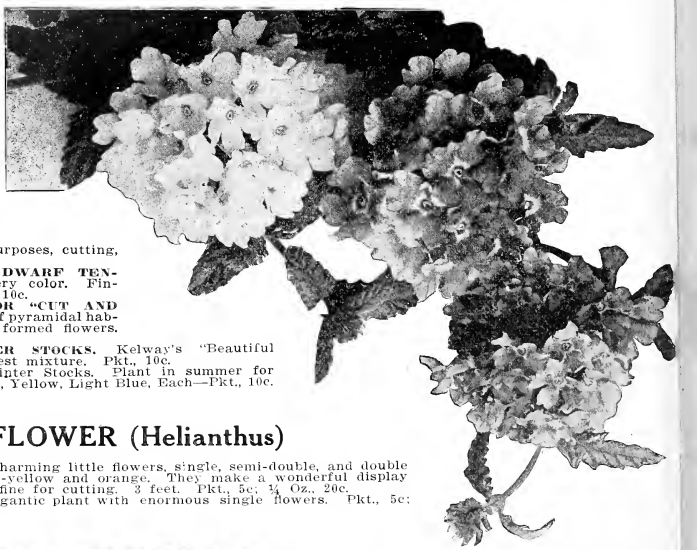
Stocks have good habit, fine leaves, beautiful flowers, rich fragrance, a long blooming season, and are adapted to all purposes, cutting, bedding, or pot culture.

LARGE FLOWERING DWARF TEN-WEEKS STOCKS. Every color. Finest for bedding. Pkt., 10c.

GIANT PERFECTION, OR "CUT AND COME AGAIN." Plants of pyramidal habit, large and perfectly formed flowers. Pkt., 10c.

BROMPTON OR WINTER STOCKS. Kelway's "Beautiful Brompton Stock" in finest mixture. Pkt., 10c.

PRINCE BISMARCK. Winter Stocks. Plant in summer for winter blooming. White, Yellow, Light Blue, Each—Pkt., 10c.

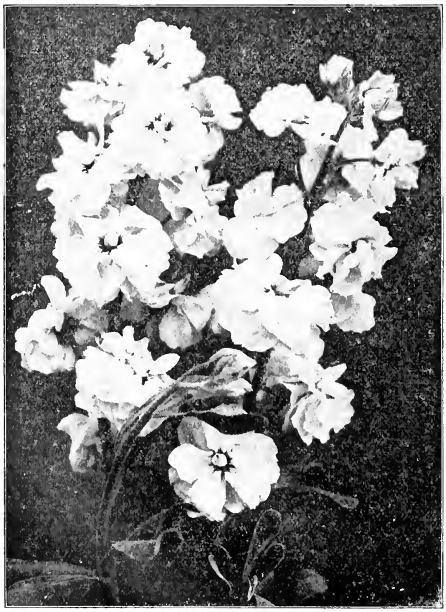


VERBENIA.

SUNFLOWER (Helianthus)

MINIATURE HYBRIDS. Charming little flowers, single, semi-double, and double mixed, in cream, golden-yellow and orange. They make a wonderful display in the garden, and are fine for cutting. 3 feet. Pkt., 5c; ¼ Oz., 20c.

MAMMOTH RUSSIAN. Gigantic plant with enormous single flowers. Pkt., 5c; lb, 30c.



STOCKS.

SUTTON'S "RED SUNFLOWER." For years horticulturists have been at work upon a red Sunflower. They have not yet succeeded with this, but have produced a beautiful flower, having petals yellow at the tips, and a zone of chestnut red around the dark center of the flower; a rich and harmonious combination. Pkt., 15c.

SWEET WILLIAM (Dianthus Barbatus)

Hardy perennial, producing large clusters of lovely flowers, ranging from pure white to almost black, through all shades of crimson, pink, rose and scarlet, beautifully marked. Two feet. Sow outdoors in spring. Plants will last several years, and freely self-grow.

DOUBLE MIXED—Pkt., 10c; ¼ Oz., 20c.
SINGLE MIXED—Pkt., 5c; ¼ Oz., 15c.
DOUBLE AND SINGLE MIXED—Pkt., 5c; ¼ Oz., 15c.

VERBENA

The Verbena is an ideal bedding plant. It is easily grown from seed, is of graceful trailing habit, has handsome foliage, lovely flowers with a wide range of delicate, brilliant and harmonious colors, many with a delicate fragrance. Its blooming season extends from August to hard frost. Seed may be sown in the open ground in May, soaking the seed in warm water to hasten germination. It may also be started in the house. A single plant will often carpet a space 3 to 4 feet in diameter.

FINE MIXED. All colors. Pkt., 5c; ¼ Oz., 25c; Oz., 75c.
W. B. MIXED. A mixture composed of the finest mammoth flowering sorts. Pkt., 10c; ⅛ Oz., 30c; ¼ Oz., 50c.
AURICULA-FLOWERED. Large, brilliant flower, with white eye. Pkt., 10c.
STRIPED MIXED—Pkt., 10c.
DEFIANCE. Intense scarlet. Fine for bedding. Pkt., 10c.
PINK SHADES—Pkt., 10c.
RED SHADES—Pkt., 10c.
BLUE AND PURPLE SHADES—Pkt., 10c.
PURE WHITE—Pkt., 10c.
DWARF MIXED. Compact little plants, five to six inches high, 18 inches across, forming a dense mat. Pkt., 10c; ¼ Oz., 25c.

ZINNIA.

FOR COLLECTIONS OF FLOWER SEEDS SEE PAGE 72.

WALL FLOWER

Tender perennial that will live through the winter in a mild climate, and will bloom all winter in the house. Bushy plants, 1½ feet tall, deliciously fragrant flowers in shades of brown, chocolate, orange and purple. Seed may be started in hot-bed.

SINGLE MIXED—Pkt., 5c.

DOUBLE MIXED—Pkt., 10c.

ANNUAL PARIS MIXED. Will bloom the first year from seed. Pkt., 5c.

ZINNIA

W. B. TALL DOUBLE GIANT ZINNIAS. This is the best seed that can be obtained of this popular flower. A splendid strain, vigorous, free-branching plants, 2 to 3 feet tall, huge velvet flowers.

White, Crimson, Purple, W. B. Mixed, Each Pkt., 5c.

FINE MIXED—Pkt., 5c; ¼ Oz., 20c; Oz., 60c.

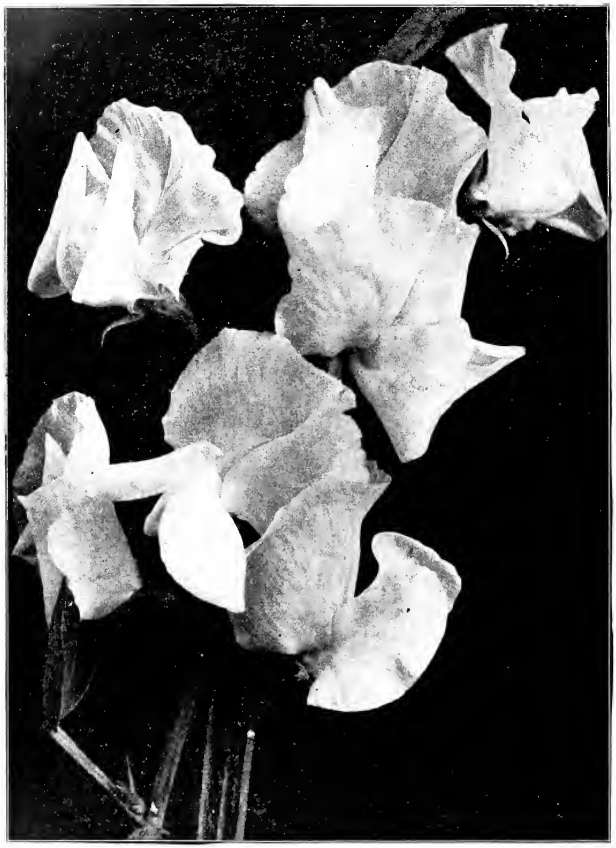
TOM THUMB MIXED. Neat, compact little bushes, 15 inches tall, covered with dainty pompom flowers. Pkt., 5c; ¼ Oz., 15c.

Order Your Seeds Early

It may seem strange why we constantly urge our customers to place their orders early. The reasons for this are more important than you might imagine. If our orders come all in a bunch, we must either double our working force or hold the orders up until we can get around to fill them. In the first case, doubling our working force, means putting in as many inexperienced hands as we now have of skilled workers, and no matter how careful the supervision is when working untrained help at this most particular class of work, seeds will become mixed, wrong amounts will be given and all sorts of mistakes occur which would never happen if the work could be more evenly distributed, allowing our regular skilled help to take care of it. During the course of the year when we are able to handle the work with our trained force, we make very few mistakes. These mistakes, however, are increased more than ten-fold when we put in inexperienced and untrained help. During January we are moderately busy; during February we are just comfortably busy; during March we are rushed. The larger proportion of orders that we can get during January and February, the fewer mistakes there will be, and the quicker will be your delivery. If we allow orders to accumulate, filling them in their turn, and making everybody wait for their turn, there is always the danger that your seeds will be a few days or a week later than you want them; you will miss the first opportunity to sow, and with many seeds the first date for sowing is a hundred per cent more useful than a week later would be.

Our final reason, this year, for asking for early orders is, that this season, with the turmoil existing abroad, there is no certainty of our being able to renew stocks that have become depleted. Ordinary seasons a cablegram would bring us renewed supplies in a week's time. This year, if we run out, it is highly improbable that we can secure additional supplies in time for seeding this season.

SWEET PEAS



LADY GRIZEL HAMILTON. Beautiful silvery lavender. This is the standard lavender Grandiflora.

LORD NELSON. Deep rich navy blue.

PRIMA DONNA. Pale soft pink.

QUEEN ALEXADRIA. Giant deep scarlet.

BLACK KNIGHT. Dark maroon.

WHITE WONDER. Remarkably free bloomer. Large double white flowers.

DAINTY. White with pink edges.

HELEN PIERCE. New. Very beautiful. White marbled blue.

BLANCHE FERRY. Rose and white. The earliest of all.

SALOPIAN. Bright deep red. Sunproof.

HONORABLE MRS. KENYON. Primrose.

GRANDIFLORA MIXED. A fine mixture of the best Grandifloras.

Prices for any of the above —Pkt., 5c; Oz., 15c.

Collection

Eight Grandiflora Varieties for 25c.

We offer one packet each: Lady Grizel Hamilton, Lord Nelson, Prima Donna, Queen Alexandria, Black Knight, White Wonder, Dainty, and Helen Pierce, for 25c.

Spencer Sweet Peas

The finest Sweet Peas are to be found in this class. The waved and fluted petals give a distinct and attractive appearance to the flowers which are very large and are usually borne three and four to the spray. The Spencers are shy seeders, dropping many flowers without setting seed. This causes the plants to bloom longer, but it also keeps the price of seed high.

Collection Spencer Sweet Peas

We offer the following collections of ten named varieties of Spencer Sweet Peas for 50c.

FLORENCE NIGHTINGALE. The largest and purest true lavender. Pkt., 10c; Oz., 30c.

FLORA NORTON. The leading blue Spencer. Has never been equaled. Pkt., 10c; Oz., 30c.

COUNTESS SPENCER. The first of this lovely type introduced in 1904. The color is a soft rose pink. It should be in every collection. Pkt., 10c; Oz., 30c.

KING EDWARD. This still holds first place as the best Crimson Spencer. Pkt., 10c; Oz., 30c.

EVELYN HEMUS. Pale buff ground with rosy picotee edges. Pkt., 10c; Oz., 30c.

WHITE SPENCER. The finest white. Very large flowers; usually four to a spray. Pkt., 10c; Oz., 30c.

OTHELLO. Large, rich maroon flowers. One of the best dark Sweet Peas. Pkt., 10c; Oz., 30c.

HELEN LEWIS. Large, bright flowers, orange salmon with pink. Pkt., 10c; Oz., 40c.

ZARINA. Beautiful pale salmon pink. Pkt., 10c; Oz., 30c.

TENNANT. Purplish mauve. A very large, fine flower. One of the very best. Pkt., 10c; Oz., 30c.

ONE PACKET OF EACH OF THE ABOVE FOR 50c.

GENERAL LIST OF SPENCER SWEET PEAS

APPLE BLOSSOM. Rose and blush waved. Pkt., 10c; Oz., 25c.

ASTA OHN. Lavender tinted with mauve. A strong rival to Florence Nightingale. Pkt., 10c; Oz., 30c.

CLARA CURTIS. Pale primrose. Pkt., 10c; Oz., 25c

DAINTY SPENCER. White with pink picotee edge. Pkt., 10c; Oz., 30c.

ELFREDA PEARSON. Blush pink. Pkt., 10c; Oz., 35c.

ROSINA. A distinct and beautiful variety. Bright rosy heliotrope, with distinct wire edge of solferino on cream. Pkt., 25c.

FLORENCE MORSE. Light blush pink. Pkt., 10c; Oz., 30c.

LORD NELSON. Dark blush. Pkt., 10c; Oz., 40c.

MAUD HOLMES. Sunproof crimson. Pkt., 10c; Oz., 40c.

MRS. ROUTZAHN. Apricot suffused with pink deepening towards the edge. Pkt., 10c; Oz., 30c.

PARADISE IVORY. Ivory white with slight tinge of buff on the standard. Pkt., 10c; Oz., 30c.

MIRIAM BEAVER. Very lovely. Soft shell salmon pink on cream, overlaid soft hydrangea. Pkt., 15c.

SPENCER MIXED. Choicest varieties in mixture. Pkt., 10c; Oz., 30c.

How to Grow Sweet Peas

Sweet Peas should be planted early in the spring, as soon as the ground can be worked. It is necessary for the soil to be deep and well prepared. It is a good plan to prepare the ground the fall before, digging deeply and working manure into the subsoil. There should be no manure in the surface soil in which the seed is sown. If manure cannot be obtained, bone meal is good. Sometimes Sweet Peas, especially the white seeded sorts, are a little difficult to start. If planted in soil that is too dry, they will remain a long time without sprouting. If the soil is too cold and wet, they are liable not to sprout at all. They should not be grown on the same ground year after year. If it is impossible to change the location, the soil should be removed to the depth and width of a foot and replaced by fresh soil.

Most people make the mistake of planting Sweet Peas too close together. The plants should be at least two or three inches apart. Four inches apart is better. In fact, some growers claim that the vines should stand a foot apart, but very few people would be willing to give this much space to the culture of Sweet Peas, and in fact, very few people have this much space at their disposal. As soon as the young plants appear above the ground, they should be given support, either wire trellis, strings or brush. It is very important that this should be done, because if the young vines once fall to the ground they are ruined, and after they are once up they grow so rapidly that they are apt to reach the stage where they need support before the gardener realizes it. When the plants are two inches high, cultivate them. In early spring the ground is usually moist enough, but later on in the season, if the weather is dry, the roots should receive a thorough soaking once or twice a week. Just sprinkling the vines or throwing a few drops on top of the ground does no good whatever.

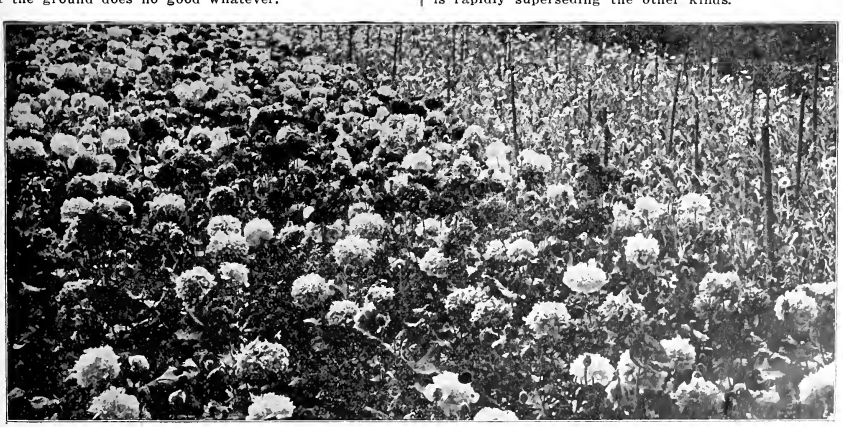
Sowing in the fall is sometimes practiced; preferably in a dry situation, sowing the seed three to five inches deep. Fall sowing gives the earliest flowers but is uncertain, and one may lose one's seed.

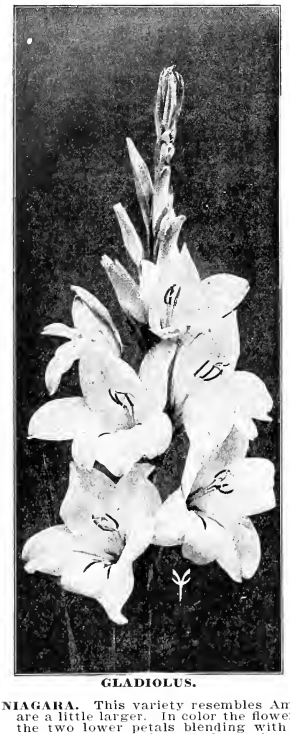
Sowing in trenches is often practiced, making the trench three to four inches deep, arranging it so that no water can stand in it, planting the seed in the bottom, covering it first only one inch deep, and gradually filling up the trench as the young plants grow.

If the vines are troubled by the aphis or plant louse, spraying with a solution of tobacco, or suds formed by whale-oil, soap, or kerosene emulsion, are all good. If the vines are troubled with the red spider, spraying with pure water is the best remedy. For cut-worms, soot dusted around the plants, or freshly slaked lime placed on either side of the row, will usually be found effective. One of the greatest foes to the Sweet Pea is the English Sparrow. He is very fond of the young plants, snapping them off as soon as they appear above ground. Often, if they survive this treatment, they will not bloom. He may be frightened away by suspending inflated paper bags from a line stretched over the row. This will keep him away until the vines get ahead of him.

One of the most important things in the culture of Sweet Peas is to keep the surface of the soil fine and mellow. All flowers should be picked off before forming pods, or the plants will stop blooming.

This seems like a lot of bother for a few flowers, but there is no flower that will repay one for time and trouble so well as the Sweet Pea, and there is no flower which is receiving greater attention from the horticulturist. The improvement in Sweet Peas within the last few years has been remarkable. Every season new varieties are introduced, most of these being of the Spencer type, which is rapidly superseding the other kinds.





GLADIOLUS.

GLADIOLI

Gladioli are the most easily grown of all the summer-blooming bulbs. Any good soil suits them. Plant as soon as danger from fost is past, 7 or 8 inches apart. They are usually planted 3 or 4 inches deep, but if you do not want to give them support, plant 6 inches deep. By planting at intervals up to the first of July, a succession of bloom may be had throughout the summer and fall.

About the end of October, when the leaves being to wither, the bulbs should be taken up, dried in the open air, and stored in a dry, cool place.

Prices on Single Bulbs and dozens are postpaid. .6 bulbs at the dozen rate; 50 at the 100 rate.

AUGUSTA. A lovely flower, pure white with blue anthers. It is a free bloomer, producing many side branches. Each., 5c; Doz., 50c.

CANARY BIRD. This is the best yellow, clear canary yellow without markings. Each, 15c; Doz., $1.40.

AMERICA. This is the most popular Gladiolus in cultivation and is conceded to be the most beautiful and valuable variety in the world. It has received a Certificate of Merit wherever exhibited. It is a vigorous grower, with luxuriant dark green foliage. The flower spikes are from 2 to 3 feet long, erect, with great numbers of the large, splendid flowers all facing one way. In color it is exquisite soft lavender pink, so delicate as to be almost a tinted white. There is no color like it in any other variety. Each, 6c; Doz., 70c.

RUFFLED GLORY. A new type, with each petel distinctly ruffled at the edge. The large flowers are beautiful cream pink with a crimson stripe in the center of each petal, all face the same way and are carried on straight, stout stalks fully three and a half feet tall. Each, 15c; Doz., $1.40.

HYDE PARK. A new hybrid of the Gandevensis type. The three upper petals are frosty sparkling white pencilled and feathered with light and dark rose. The lower petals are distinctly blotched with cream. It is a very early bloomer. Each, 15c; Doz., $1.50.

PINK BEAUTY. This is a grand variety for massing, as it stands up well. It is of splendid vigor. Each bulb produces from one to three spikes of bloom. In color it is a rich pink with crimson blotches. It is one of the earliest of the Gladioli and forces well. Each, 5c; Doz., 50c.

BARON HULOT. This is the finest blue variety. The dark velvety flowers of the Lemoine type are closely set together on long, straight spikes. Each, 10c; Doz., $1.00.

MRS. FRANK PENDLETON, Jr. A very beautiful, striking and orchid-like variety. The flowers are large and well expanded, in color delicate flushed salmon pink with blood-red blotch in throat. It has been described as a Lemoine type on a Gandavensis stem. It is splendid for cut flowers as every flower opens perfectly in water. It has been awarded Certificates of Merit by the Massachusetts Horticultural Society, August, 1909, and American Gladiolus Society at Baltimore, August, 1911. Each, 75c.

NIAGARA. This variety resembles America but the flowers are a little larger. In color the flowers are a rich cream in the two lower petals blending with Canary yellow. The stamens are purple and the anthers pale carmine. This is decidedly the best of the cream-colored varieties. This has received a great number of Certificates of Merit. Each, 25c.

KLONDYKE. This is a gorgeously beautiful variety, and a vigorous grower. The flower is a beautiful clear primrose yellow with crimson maroon blotches. Ea., 8c; Doz., 85c.

ROCHESTER WHITE. This lovely variety is pure white throughout, even to the anthers. The fact that the anther and pollen are white places it in a class by itself. The flowers are large and broadly opened, well arranged on a spike three feet high. This was awarded First Prize by New York Horticultural Society, at New York Botanical Gardens, Bronx Park, New York City, for twenty-five spikes of Best White, August, 1911. Each, 40c.

PEACE. Beautiful white flowers, lower petals feathered with pale lilac. They are unusually large, and borne on strong, upright spikes. This is a fine variety for cutting; the flowers keep well, and open well in water. Each, 25c.

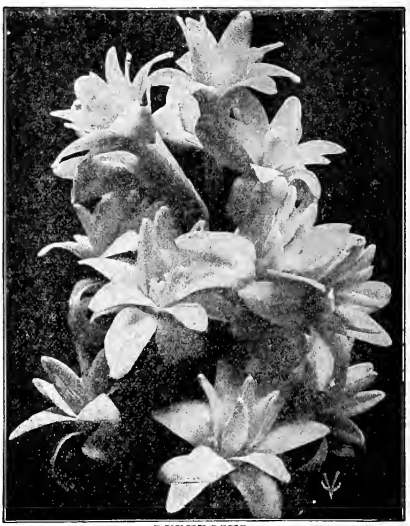
W. B. MIXTURE. This mixture is composed of the best named sorts, including also the best of the Childsii, Lemoine's and Nanceanous kinds. You will not find a better mixture than this in the United States. Price—70c per doz., postpaid; $4.50 per 100, sent at purchaser's expense.

TUBEROSES

The Tuberose, with its beautiful waxen flowers and rich fragrance, is well known and grown everywhere. If it is started in pots and transplanted to the open ground, flowers may be had much earlier. We offer the genuine Excelsior Dwarf Pearl.

EXTRA SIZE BULBS, by mail, postpaid, Ea., 7c; Doz., 65c.

FIRST SIZE BULBS, by mail, postpaid, 3 for 10c; Doz., 25c.

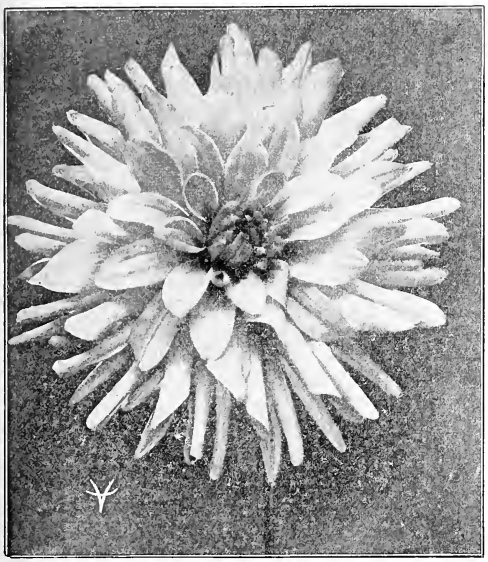


TUBEROSES.

DAHLIA

Dahlias will grow in almost any kind of soil, but it should not be too rich. The soil should be plowed or spaded deeply as early as possible and then again just before planting. If it is already fertile, use no manure or fertilizer. If it is poor, broadcast any kind of manure before the first tilling. If manure is not obtainable, use some good fertilizer, not too rich in Ammonia or Nitrogen. Apply this at the rate of one-half ton to the acre.

There is a good deal of difference in opinion as to the proper time to plant. Formerly everybody planted Dahlias as early as possible. Lately many authorities recommend planting as late as July 1st. It is often difficult, however, to keep the roots in good condition so late. We would not advise planting before late May. Plant the roots four to six inches deep and two to four feet apart. Allow but one stalk to a root; cut the others off. If you wish, you can make new plants from these sprouts, as they root in soil very readily.



CACTUS DAHLIA.

The soil around the roots of Dahlias should never be allowed to crust. Cultivate deeply until the buds begin to open. After this, one to two inches. By this method plants may be successfully carried through very dry summers.

The roots should be stored in cool cellars away from furnace heat.

CACTUS DAHLIA

Cactus Dahlias are the most dainty and artistic, having long narrow petals, often beautifully twisted and curved.

COUNTESS OF LONSDALE. This is one of the most easily grown and freest blooming of the Cactus Dahlias. The flowers are very large and double of perfect form. The color is rich apricot tinged violet. This should be in everyone's garden. Each, 15c.

J. H. JACKSON. This is one of the most easily grown. It is a perfect form; rich velvety maroon in color. It is inclined to produce imperfectly formed flowers early in the season and this should be discouraged by pulling off the first buds. Each, 15c.

SATISFACTION. This is one of the new Cactus Dahlias. It is a beautiful variety with long, narrow incurved petals, giving the flower a very graceful form. In color it is a soft sea shell pink. Strong roots. Each, 50c.

FLORADORA. This is one of the freest bloomers, unlike many other of the Cactus varieties, although it is an early bloomer the flowers are always perfect. It has one objection, the stems are apt to be rather short, but the flower is of such splendid form and the color, a pure garnet, is so beautiful that it ought to be grown anyhow. Each, 15c.

KRIEMHILDE. The flowers of this variety are very dainty in form. In color it is a deep rosy pink with lighter center. The flowers keep a long time after cutting. It is a late bloomer. Each, 15c.

LIBELLE. This is of most beautiful form, always full to the center. Good stems. A profuse bloomer. Color rich dark purple. 25c.

MISS A. F. PERKINS. Pure Canary Yellow, heavily tipped with white. The flowers are very large, and of perfect Cactus form on long stems. 25c.

MRS. GEO. STEVENSON. This is the best yellow Cactus Dahlia. The flowers are very large, clear Canary yellow, borne on long, very stiff stems. It is a good free bloomer. 20c.

CRIMSON BEAUTY. A dainty flower of beautiful Cactus form. Color, clear brilliant glowing crimson. 25c.

EARL OF PEMBROKE. This is a standard variety, in color a rich velvety plum. 15c.

FRUTE. This is one of the finest pink Cactus Dahlias. In color it is a soft salmon pink shaded and tipped clear bright pink. 25c.

H. SHOESMITH. The best bright red Cactus. It is of fine form with long slender quilled petals. In color, a rich, brilliant vermilion scarlet. 25c.

MASTER CARL. The largest Cactus Dahlia grown. Color, a bright amber. An immense flower of perfect form, with large and gracefully curved petals. 25c.

MONT BLANC. Beautiful pure white Cactus. Flowers full to the center. Of splendid form, borne on long, stiff stems. 15c.

PRINCE OF YELLOWS. This is a very profuse bloomer with soft golden yellow flowers. 15c.

TITANIA, "Queen of the Night." Beautiful satiny maroon 25c.

THOMAS PARKINS. This is a very valuable kind for cutting. It has long, stiff stems, and large finely formed flowers. Color, bright terra cotta. 25c.

WHITE SWAN. Beautiful pure white Cactus. 20c.

COUNTESS OF MALMESBURY. This is a very beautifully formed flower. Petals very long, narrow and incurved. Color, delicate peach pink. 25c.

CREPUSCLE. Very large and splendidly formed. Flowers yellow shaded deep orange. 25c.

ETRURIA. A splendid "autumn shade" variety. Very large flowers with long, slender petals, borne on long, slender stems. Golden shaded reddish salmon. 25c.

MRS. H. SHOESMITH. This is the best pure white Cactus Dahlia. Finely formed flowers with long, narrow petals. 25c.

RADIUM. Deep orange pink flowers, with delicate yellow tips. Magnificent form. 25c.

LOVELY. Soft lilac pink. 15c.

DECORATIVE DAHLIA

The Decorative Dahlias are intermediate between the Show and Cactus, having large double flowers with broad folded petals, usually reflex and loosely arranged. They are usually strong growers and profuse bloomers.

JACK ROSE. This is a splendid variety. The flowers are very large, produced in the greatest profusion, the color of the rose of the same name. 15c.

DAHLIA—Continued

OBAN. A beautiful flower. Soft terra cotta in color. Of most graceful form, borne on long, slender stems. 15c.

BLUE OBAN. This is a sport from Oban. Soft lavender blue flowers. The nearest approach to blue in Dahlias. Each, 15c.

PERLE D' OR. This is one of the most beautiful flowers in existence. It is most graceful in form. The petals are broad and of exquisite texture. It is pure white in color and with golden heart. It is splendid for the garden or for cutting. 15c.

SOUVENIR DE GUSTAVE DOAZON. The plants grow very tall. The flowers are enormous in size and a soft scarlet red in color. 15c.

PRINCESS VICTORIA LOUISE. A very free bloomer, with flowers of deep rich cerise. 25c.

HENRY PATRICK. A very beautiful Dahlia. The flowers are large snow white and of great substance. 15c.

NYMPHAEA. A delicately beautiful flower. White suffused shrimp pink. 15c.

YELLOW DUKE. Immense flowers with quilled petals on long stems. Clear canary color. 15c.

ZULU, "The Black Dahlia." This is an old favorite. In color it is rich velvety maroon shaded black. 15c.

SHOW DAHLIAS

The original Dahlia was of the Show type. The Show Dahlias are of ball shape, very uniform and regular with cupped or quill petals.

A. D. LIVONI. This is one of the most beautiful and reliable of the Show Dahlias. The flowers are a beautiful rosy pink. Very symmetrical, with quilled petals forming perfect balls. It grows four feet in height. It is a splendid variety for massing, the plants being literally covered with flowers. 15c.

ARABELLA. This is one of the loveliest. In color it is soft primrose, shaded and tipped rose. 15c.

MEEHAN'S MALLOW MARVELS.

STORM KING. This is the earliest white Show Dahlia and is still considered one of the finest. It is a profuse and constant bloomer, and a strong, vigorous grower. The large perfect flowers are produced on long, stiff stems. 25c.

ETHEL MAULE. This is a magnificent pure white variety, very large, fine form. 30c.

DOROTHY PEACOCK. This is claimed by the originator to be the best pink Dahlia in the world. The plants are strong and vigorous with heavy dark green leaves. Flowers of large size, beautiful clear pink, produced in great profusion on long, stiff stems. 50c.

PRINCESS VICTORIA. The best pure yellow Cactus Dahlia. An early and profuse bloomer. Flowers clear pure canary yellow of perfect form. Long, slender stems. 25c.

QUEEN OF THE BELGIANS. Beautiful soft sea shell pink. 25c.

KEYSTONE. Very fine. Flowers large, of soft lilac pink, penciled with crimson. 15c.

RED HUSSAR. This is the best red Show Dahlia for cutting. The plants are strong and vigorous, the flowers of rich dazzling cardinal. Very free bloomer on long stems. 15c.

MRS. DEXTER. Very beautiful rich salmon. 15c.

RUBY QUEEN. Rich ruby red. 15c.

FRANK SMITH. Rich dark maroon, sometimes tipped with white. 15c.

LUCY FAUCETT. Pale yellow penciled carmine. Very large flowers. 15c.

PAEONY FLOWERED DAHLIAS

The Paeony Flowered Dahlia is one of the newest types, with large semi-double flowers composed of broad petals loosely and very irregularly arranged.

GEISHA. This is a most striking flower. The petals are golden yellow, bright scarlet in centers. The plants are strong and vigorous and the flowers are very large, borne on long, wiry stems. 50c.

QUEEN WILHELMINA. This is a splendid variety of this type with immense fluffy pure white flowers, with yellow center. It is very free flowering and the flowers are borne on good stems. 25c.

LA RIANTE. Strong plants, with very large, beautiful bright lilac flowers. 25c.

GERMANIA. Brilliant strawberry red. Plants of compact growth. 20c.

QUEEN EMMA. A charming variety with flowers of Hollyhock pink, inner petals banded with gold. 25c.

MEEHAN'S MALLOW MARVEL

This is one of the finest plants that has been introduced in recent years. It has been tested long enough to prove its merits. It was produced at the suggestion of the late Thomas Meehan by crossing the crimson-flowered mallow of the South, a variety bearing large and beautiful crimson flowers, but not quite hardy in the North, with the common swamp mallow, which is very common in New Jersey and the Eastern States. The result of this hybridization was the beautiful "Meehan's Mallow Marvel." The plants form large clumps, in rich soil with plenty of water, sending up stems six to eight feet in height in one year. They are of herbaceous character, dying down in the fall, and springing up again the following year, stronger than ever. They may be divided, forming new clumps. They begin blooming in late July and continue until frost. The flowers resemble the Hollyhock, which belongs to the same family, are usually eight to ten inches in diameter, on thrifty plants sometimes twelve inches in diameter, in soft shell pink, fiery crimson, white and rich blood red. A group of these noble plants with their wonderfully rich and brilliant flowers is indescribably striking and beautiful. We have grown them ourselves on Woodland Farm, and no other flower has given us so much pleasure and satisfaction. They are very hardy, doing as well in Canada and the mountain regions of the Northern States as they do in the South. Our stock is secured from the original growers, and is exceptionally strong and healthy.

2 Year Old Roots.		3 Year Old Roots.	
Red . .	50c each; $5.00 Doz.	Red . .	80c each; $8.00 Doz.
Pink .	30c each; $3.00 Doz.	Pink .	40c each; $4.00 Doz.
White .	30c each; $3.00 Doz.	White .	40c each; $4.00 Doz.

Single plants when paid for at the "each" rate, will be sent postpaid; over this at purchaser's expense.

MANIFEST ERRORS EXCEPTED

These seeds are described in our Catalogue. Prices are for immediate acceptance only, and subject to being unsold. Price List is changed about once a week, usually on Saturdays. Samples sent upon application. **BAGS**—On seeds marked 1, jute bags are free with any amount purchased but are weighed in gross for net. On seeds marked 2, bags are free up to bushel lots (weighed in gross for net), **but in bu. lots and above add 25c. each for seamless or 10c. each for jute bags.** Seeds marked 3, can be safely shipped in 2 bu. cotton bags for which we charge 15c. each. Corn bags or crates free. All Shipments double sacked add 25 cents for extra bag.

	NAME OF SEED.	MARK.	Price per pound Postpaid	10 lbs not prepaid.	30 to 60 pounds per pound.	60 pounds	100 pounds	5 bushel	10 bu. lots per bushel
2	Alfalfa, Nebraska	Lot A	$ .50	$2.10	$ .21	$ 12.00	$20 00	$11.95	$11.90
2	Alfalfa, Dakota	Lot 1	.50	2.30	.23	13 50	22.50	13.45	13.40
2	Alfalfa, Dakota "30"	Lot 1	.50	2 50	.25	14.50	24.16	14.45	14.40
2	Alfalfa, Grimm	Lot 1	.80	7 00	.60	30.00	50.00	30.00	
2	Alfalfa, Peruvian	Quotations later							
2	Clover, Medium	W. B.	.50	2.00	.20	11.75	19.58	11.70	11.65
2	" Mammoth	W. B.	.50	2.10	.21	12.00	20.00	11.95	11.90
2	" Alsike	W. B.	.50	2 00	20	11.75	19.58	11.70	11.65
2	" Sweet(Melilotus) Alba	Lot A	.50	2.60	27	14 50	24.17	14 45	14.40
2	" Sweet(Melilotus) Indica	Lot A	.35	.80	07	3.60	6.00	3.55	3.50
2	" White	Lot 1	.70	3 70	.37	22 20	37.00	22.15	22.10
2	" Crimson	Lot A	.50	1.50	.15	6.70	11.16	6.65	6.60
2	Timothy	W. B.			45lb $3.85		8.55	3.80	3.75
1	Bromus Inermis	Lot 1	60	2.75	50lb 12.50		25.00		
1	Orchard Grass	Lot A	.45	1.75	50lb 8.25		16.50		
2	Red Top	W. B.	.65	3.60	50lb 17.50		35.00		
1	Tall Meadow Oats	Lot A	50	2.20	" 10.00		20 00		
1	Kentucky Blue Grass	W. B.	.35	1.30	" 6.00		12.00		
1	Kentucky Blue Grass Strippings	Lot A	.40	.75	" 3.50		7.00		
1	Canada Blue Grass	Lot A	.50	.85	" 3.75		7.50		
1	Meadow Fescue	Lot A	.50	1.50	" 5.25		10.50		
1	English Rye Grass	Lot A	.35	.70	" 3.63		7.25		
1	Sheep's Fescue	Lot A	.50	2.20	" 10.00		20.00		
1	Tall Meadow Fescue	Lot A	.50	2.30	" 11.00		22.00		
1	Sudan Grass	Lot 1	1.00	.90					
3	Lawn Mixture		50	1.80	50lb 8.60		17.20		
3	Dry Pasture Mixture		.45	1.60	50lb 7.65		15.25		
3	Moist Pasture Mixture		.45	1.70	50lb 7.90		15.75		
3	Permanent Meadow Mix, dry		.50	2.00	50lb 9 50		19.00		
3	Permanent Meadow Mix, moist		.50	2.10	50lb 9.75		19.50		
2	Jap Millet	Lot 1	.50	.85	50lb 3.38		6.75		
2	German Millet, (Tenn. grown)	Lot A			50lb 2.35		4.70	2.30	2.25
2	Hungarian Millet	Lot A			48lb 1.50		3.15	1.46	1.41
2	Buckwheat, Jap	Lot A			50lb 1.70		3.40	1 65	1.60
2	Sugar Cane, Amber	Lot A		.50	50lb 1 88		3.75	1.83	1.78
2	Vetch, Spring, smooth or Oregon	Lot A		.60		3.75	6.25	3.70	3.65
2	Vetch, Winter, hairy or sand	Lot im 1	50	1 60	.15	8 35	13.91	8.30	8.25
2	Vetch, Winter, hairy or sand	Home	Quotations later						
2	Canada Field Peas	Lot A				3.10	5.16	3.05	3.00
2	Soys, Ex. sel. Sable or Wilson	Lot 1		.50		3.25	5.41	3 20	3.15
2	Soys, Mammoth	Lot 1		.50		2.65	4.41	2 60	2.55
2	Soys, all other varieties			.50		2.75	4.58	2.65	2.60
1	Cow Peas, New Era	Lot 1				3.00	5.00	2.95	2.90
1	Cow Peas, Whipporwill	Lot 1				3.00	5.00	2 95	2.90
2	Rape, Dwarf Essex	Lot A		1.00	50lb 4.88		9.75		
2 or 3	Beardless Barley, Champ	Lot 1			48lb 1.25			1.20	1.10
2	Bearded Barley, Wisc. Pedigree	Lot 1			48lb 1.50			1.30	1.25
2	Rye, Black or Winter	Lot A			1 bu 1.45			1.40	1.35
	Corn, Wing's Imp. White Cap				1 bu 3.25			3.20	3.15
	Corn, Clarage, 100 da. W. Minn. 13				1 bu 2.85			2.80	2.75
	Corn, all other varieties				1 bu 2 50			2.40	2.30
2	Oats, Siberian and 60 Da	1 bu. $1.25; 10 bu. $1.00; 50 bu. 90c.; 100 bu. 85c.							
2 or 3	Oats, Imp. American	1 bu. $1.25; 10 bu. $1.00; 50 bu. 90c.; 100 bu. 85c.							
	Nitragin Culture for any legume	Garden size $1.00; 1 A. $2; 5 acre $9. Postage 10c per A. extra							

Corn prices are either for ear corn, or nubbed and tipped, shelled and graded. When not specified, we use our judgment as to sending shelled or ear corn. 95 per cent germination guaranteed.

☞ Please turn this Price List over ☜

ALFALFA VARIETIES

Within the past few years alfalfa prices have been largely gauged by the hardiness of the stock. Southern grown seed is cheapest; northern seed from long standing meadows and hardy strains, the highest priced.

Our Nebraska alfalfa, Lot A, is as good as possible to secure in seed grown in this latitude.

Our Dakota alfalfa, Lot 1, is from Dakota meadows not less than 10 years old.

Our Dakota "30" is Dakota grown seed from meadows approximately 30 years old. Next to Grimm alfalfa, Dakota "30" is the hardiest seed in the world, and it even somewhat resembles the Grimm. The root forks somewhat similar to Grimm and the blossom is usually somewhat like Grimm.

Our Grimm alfalfa is genuine, sold to us on an affidavit of purity.

Peruvian altalfa is a new species designed for the south; should not be seeded north of the Mississippi line. It is highly recommended south of that line.

Siberian varieties are quoted in the catalogue. These are just about as hardy as the Grimm except that the Orenberg has proven itself still hardier. A report just received states that it survived winter at the edge of the Arctic Circle where both Grimm and Cossack winter killed.

Please note that quotations on Cossock given in the catalogue are in error. Prices should read: Oz. 25c; 1-2 lb. $1.25; lb. $2.00.

SUDAN GRASS.

Sudan Grass is a very heavy yielding forage crop, producing as heavily as Sugar Cane, but with finer stalks It is possible that it will supplant the Millets and Sugar Cane. Sow as you would Sugar Cane, using 3 pounds to the acre.

WINTER VETCH.

This summer we will probably have large stocks of American grown Winter Vetch Seed, which we will quote when the seed is ready to offer.

Canadian Peas are short crop and prices may go still higher.

Dwarf Essex Rape is high on account of European war.

We have good sized stocks of Extra Select Sable, possibly enough to last throughout the season without selling common stock Sable at all. Please note that the Extra Select is greatly superior to common stock, producing several bnshels more per acre as well as more forage.

PRICE LIST OF FERTILIZERS.

	Analysis	F. O. B. Chicago or Cleveland	F. O. B. Mechanicsburg
Diamond A	3-8-3	$24.05 per ton	$27.83 per ton
Superphosphate	2-8-2	19.85 per ton	23.63 per ton
"	1-12-3	21.16 per ton	24.94 per ton
Beef Bone and Potash	2¼-25-1	27.72 per ton	31.50 per ton
Pure Bone Meal	3-24-0	26.46 per ton	30.24 per ton
Ground Steamed Bone	2-20-0	24.57 per ton	28.35 per ton
Ground Beef Bone	2½-27-0	26.46 per ton	30.24 per ton
Special Bone Meal	1-29-0	26.46 per ton	30.24 per ton
Garden City Phosphate	0-14-0	10.92 per ton	14.70 per ton
High Grade Phosdhate	0-16-0	11.97 per ton	15.75 per ton

Rock Phosphate in carlots bagged 14 per cent phosphorus $6.00 per ton F. O. B. Mines.

Rock Phosphate in carlots bulk 14 per cent phosphorns $5.00 per ton F. O. B. Mines.

Rock Phosphate less than carlots 14 per cent phosphorus $11.00 per ton F. O. B. Mechanicsburg.

Have just bought 200 tons Basic Slag; all that is in the U. S. Offer this in Ohio only at the following prices: Carlots $17 f. o. b. Baltimore. Less than carlots $21.50 per ton f. o. b. Mechanicsburg. Alalysis 17 to 19 per cent Phosphoric acid.

These fertilizer prices are made so close that we must require cash the same as for seeds.

THE WING SEED CO., Mechanicsburg, Ohio.

ORDER SHEET

THE WING SEED COMPANY, Mechanicsburg, Champaign Co., Ohio.

Shall we ship by Mail, Freight or Express? ________ *Date* ____________________

Name ____

Post Office ____

Box No. ____________ *R. F. D. No.* ____________ *P. O. Box* ____________

Street No. ______________________ *State* ______________________

Shipping point if different from Post Office ______________________________

Amount Enclosed

Postal Money Order __________

Express Money Order __________

Draft __________

Stamps __________

Cash __________

Total __________

WE DELIVER FREE IN THE U. S.

To any postoffice, railroad express office or freight station, at our option, all seeds in packages, ounces, one-fourth pounds, pints, pounds or quarts, unless otherwise noted in catalogue

Purchaser pays transit charges on quantities larger than those named above, as well as on FARM SEEDS and IMPLEMENTS.

Bushels	*Qts.*	*Pts.*	*Lbs.*	*Oz.*	*Pkts.*	*NAMES OF ARTICLES WANTED*	*PRICE* *$*	*Cents*
						Amount carried over		

Bushels	Qts.	Pts.	Lbs.	Oz.	Pkts.	NAMES OF ARTICLES WANTED	PRICE $	PRICE Cents
						Amount brought forward		

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